

AN INTERVENTION TO IMPROVE PERFORMANCE IN
THE 4TH STEP OF THE 12-STEP RECOVERY
PROGRAM OF ALCOHOLICS ANONYMOUS

By

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Abstract of Dissertation Presented to the Graduate School of
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AN INTERVENTION TO IMPROVE PERFORMANCE IN THE 4TH STEP
OF THE 12-STEP RECOVERY PROGRAM OF ALCOHOLICS ANONYMOUS

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This study tested the effects of two interventions on student subjects' performance of the 4th Step (taking a personal moral inventory) in the 12-Step recovery program used in Alcoholics Anonymous (AA). Using a posttest only design, subjects were randomly assigned to one of three conditions: (a) viewing a Cognitive Modeling Videotape which demonstrates how to do the 4th Step; (b) reading written excerpts from the basic AA text which tell how to do the 4th Step, viewing a videotape of these excerpts, and then writing an essay about themselves; and (c) a no-treatment control condition. The criterion task involved two skills essential to 4th Step performance: listing and describing one's specific resentments, fears, and harmful acts toward others. Subjects' level of shame was also explored as a possible mediator of the effects of the interventions

tested. Trained raters scored subjects on two dependent variables: the number of items written and the specificity of these items. Results indicated that there were no differences between the number of items written by subjects, as a function of the conditions to which they were exposed. However, in terms of specificity of examples written, subjects exposed to the Cognitive Modeling videotape significantly outperformed subjects exposed to the other two conditions. Shame was not found to be a mediator of this effect. These results are discussed, and future research is suggested.

CHAPTER I INTRODUCTION

The Problems Addressed by this Study

There are two problems motivating this study. The first problem is that of alcohol abuse, which causes biopsychosocial damage to the alcohol abusers themselves and to the people around them. Enormous economic costs are associated with this damage. Third party payers are becoming reluctant to absorb as much of the costs of alcoholism treatment as they have in the past (Seesel, 1987). If this trend continues, there may be an increased need for low-cost alcoholism treatment. Alcoholics Anonymous (AA) is a no-cost, effective treatment program for many alcoholics who are recovering from alcohol addiction.

The second problem motivating this study and the one constituting its major focus involves the 4th Step of the 12-Step recovery program of AA, a pivotal part of AA's 12-Step recovery program. Specifically, the problem is that the 4th Step is difficult for people to perform, and there is little agreement about how to teach someone to do it effectively (Anderson & Gilbert, 1989).

The 4th Step is a self-description task in which recovering alcoholics write a personal inventory of realities

about themselves, some of which are difficult for them to face. The purpose of the 4th Step is for recovering alcoholics to identify aspects of themselves that they may have to change in order to stay sober. This study will test the effects of a psychological intervention on subjects' performance of a task simulating the 4th Step. The ultimate purpose of this study is to develop an intervention to help people to better adhere to (or "work") the 4th Step, so they can progress on to the other steps in 12-Step AA program.

It is not only alcoholics who are involved in 12-Step programs. The 12 Steps are commonly used by many nonalcoholics such as drug addicts, eating disordered people, and the significant others of addicted people who belong to fellowships such as Narcotics Anonymous, Overeaters Anonymous, and Al-Anon. This study will focus on Alcoholics Anonymous and the 12 Steps of AA because it was in AA that the 12 Steps were developed, and AA is the largest population using these steps. However, the results of this study will have implications for performing the 4th Step in any of the common 12-Step programs. With the exception of minor changes in wording, the steps in other 12-Step programs are identical to AA's 12 Steps.

This chapter will first discuss both problems mentioned above, then provide a brief description of the 12 Steps of AA. Finally, the purpose and the significance of the study will be discussed.

The Damage and High Cost of Alcoholism

For 20 years, alcohol abuse has been officially recognized as a significant cause of illness, accidents, and death (N.I.A.A.A., 1971). Between 20% and 35% of all adult beds in general care hospitals in the United States are occupied by patients with alcohol-related medical problems (Schuckit, 1984). Over half of all deaths from automobile accidents and nearly half of all violent deaths from (non-automobile) accidents, homicides, and suicides involve alcohol consumption (Mooney, 1983). Mortality rates are significantly higher for chronic alcoholics than for those of normal drinkers (Taylor & Helzer, 1983). For example, the risk of fatal hemorrhagic stroke for heavy drinkers is 50% higher than that of light drinkers (Seesel, 1987). Estimates of alcohol-related deaths in the United States are as high as 200,000 per year, making alcohol-related deaths one of the three leading causes of death (Sherin, Piotrowski, Panek, & Doot, 1982).

In addition to illness and accidental injury or death, psychiatric or psychological problems are disproportionately high among alcoholics. For example, Solomon (1983) found that between 20% and 50% of all admissions to psychiatric hospitals and services were diagnosed as alcoholic; and Strachan (1982) estimated that the proportion of alcoholics with brain atrophy was between 50% and 100%. Kendall and Staton (1966) reported the suicide rate among the alcoholics

in their study to be 58 times higher than the normal population.

Alcoholics are not the only people injured by alcoholism. The estimated 28 to 34 million people in the United States who grew up in alcoholic homes are at high risk for developing psychological and physical disorders (Black, Bucky, & Wilder-Padilla, 1986). Based on 1.6 million insurance claims by Blue Cross members between 1984 and 1986 in Philadelphia, children of alcoholics have a 36% higher rate of inpatient hospital admissions. Additionally, mental disorder inpatient admission rates among children of alcoholics are almost twice as high as those of other children (Children of Alcoholics Foundation, personal communication, November 2, 1990).

One way of estimating the size of the drinking problem in the United States is to calculate its economic impact. In 1984, alcoholism and alcohol-related problems cost our society about \$120 billion, more than the foreign debt of Brazil or Mexico (Seesel, 1987). This figure is twice the economic cost of all illegal drug problems combined (Seesel, 1987). A significant component of the total economic cost of alcohol abuse is the cost of its treatment. The 1987 National Drug and Alcohol Treatment Unit Survey found the total cost of alcohol and drug treatment services in the United States to be over \$3 billion in 1986, with the largest share of this funding coming from private third-party

payments--over \$900 million (Sulima, 1989, p. 7). There is a threat of dwindling third party payments for professional, inpatient and outpatient alcoholism treatment (Lewis, 1988).

Michael Ford, the president of the National Association of Addiction Treatment Providers, reported the recent trend of managed care has had "a brutal impact on addictions treatment by its relentless demand for lower costs" (Lewis, 1988, p. 21). Managed care involves insurers' scrutinizing treatment providers and then selectively contracting for services with hospitals and treatment facilities through health maintenance organizations and preferred providers. Should this trend continue, the financial feasibility of professional inpatient or outpatient treatment for alcoholism would decrease, thereby increasing the need for alternative, low- or no-cost recovery programs such as AA.

Not only are the physical and mental morbidity rates high for "active" or "practicing" alcoholics, but the relapse rates are high for alcoholics once they have sought treatment. Although reported relapse rates vary across studies depending upon definitions of relapse (e.g., loss of controlled drinking versus loss of total abstinence) and upon the length of the follow-up time periods at which relapse is assessed, most authors paint a bleak picture of the prospects for lasting recovery among alcoholics (Brown, Peterson, & Cunningham, 1988). Brown, Peterson, and Cunningham argued that many alcoholics, upon entering treatment, are not

equipped to deal with a life of abstinence because they lack the tools to deal with life effectively.

On a more hopeful note, however, Armor, Polich, and Stambul (1974) found the highest abstinence rates among recovering alcoholics who received high amounts of treatment and then attended the program of Alcoholics Anonymous regularly. Despite numerous methodological difficulties in validly measuring the success of Alcoholics Anonymous (Bebbington, 1976; Tournier, 1979; Ogborne & Glaser, 1981), many researchers consider Beckman's (1980) conclusion that AA is successful to be valid (Brown, Peterson, & Cunningham, 1988). In the United States and Canada there are 900,000 active AA members who have an average length of continuous abstinence from alcohol of 50 months (Alcoholics Anonymous, 1989).

Boscarino (1980) reported that the use of AA in alcoholism treatment is widespread. Nearly 95% of the alcoholism treatment centers in his national survey recommended AA to their clients, and over 50% of these treatment centers held regular meetings within their facilities. In a nationwide study of state hospitals, AA was found to be the most frequently used therapy instrument in 88% of the institutions surveyed; second in frequency was group psychotherapy which was used in 78% of institutions. For follow-up treatment, 82% of institutions used AA while

local mental health clinics were used in 47% of cases (Moore & Buchanan, 1966).

There is evidence that mental health professionals are increasingly referring clients to AA. Results from the 1986 and 1989 national membership surveys conducted by AA indicate that during this three year period, the percentage of active AA members who attributed their attending their first AA meeting to referring by counselors (including psychologists) or rehabilitation facilities rose from 36% to 40% (Alcoholics Anonymous, 1989). The intent of this study is to lay an empirical foundation for enhancing people's ability to do a small but important part of the 12-Step program used in AA--the 4th Step.

A Description of AA and the 12-Step Recovery Program

Alcoholics Anonymous was started in 1935 by two alcoholics in Akron, Ohio, who discovered they could each stay sober by helping the other to do so and by adhering to simple spiritual principles. AA describes its essence as follows: "Alcoholics Anonymous is a fellowship of men and women who share their experience, strength, and hope with each other that they may solve their common problem and help others to recover from alcoholism" (Alcoholics Anonymous, 1976, p. 2). AA is now a worldwide organization of 1.7 million active members, 29% of whom have maintained continuous sobriety for over 5 years (Alcoholics Anonymous 1989).

Part of the AA recovery program consists of the 12 Steps, which are "suggested as a program of recovery" (Alcoholics Anonymous, 1976, p. 59). The 12 Steps are widely-used spiritual principles for helping recovering alcoholics live useful and meaningful lives, free from alcohol (Smith, 1986). Although the 12 Steps are frequently described as "spiritual steps", they represent profound cognitive, affective, and behavioral tasks, central to the inner change process that many AA members claim to have experienced by adhering to (or "working") the 12 Steps. Some of these psychological tasks include the acceptance of people, places, and things that the alcoholic cannot change with his/her own power; self-awareness, rigorous self-honesty and self-disclosure; making amends for wrongdoings in the past; and becoming an effective helper to other alcoholics who want help.

One of the 12 Steps, the 4th Step, lends itself to psychological intervention and as such is the subject of this study. Step 4, "Made a fearless and searching moral inventory of ourselves" (Alcoholics Anonymous, 1976, p. 59), is a written, self-awareness and self-description task that can be seen as a pivotal point in the 12-Step recovery program. Briefly, the 4th Step involves listing and describing one's personal problems, identifying one's own shortcomings associated with each problem, accepting other people as imperfect, and then formulating cognitive,

behavioral, and spiritual principles for one's future actions. This study limits itself to the core of the 4th Step which is its first two parts--listing and describing one's problems. The rest of the 4th Step, described in Chapter II, is beyond the scope of this study.

The Specific Problem Addressed by this Study

The specific problem addressed by this study is that the 4th Step of AA, a pivotal component of the 12-Step program of recovery, can be difficult for some alcoholics to do. Many alcoholics report the 4th Step is one of the most challenging parts of the AA program (Anderson & Gilbert, 1989). The crux of the AA program (or any 12-Step program) is facing difficult realities about one's self by taking a personal inventory of them and then working to become a better person by using the support of the fellowship, a "Higher Power", and the Twelve Steps (AA World Services, 1989). The 4th Step process of describing oneself and identifying one's weaknesses is an essential prerequisite for working the remainder of the 12-Step program and will be discussed further in Chapter II.

The Purpose of this Study

The specific goal of this study is to test in a laboratory experiment an instructional intervention to improve performance on a Simulated 4th Step Task. Additionally, this study will ask the exploratory question of whether shame, a salient clinical topic in addiction

treatment, is a factor in making the 4th Step difficult for some people to do. The Simulated 4th Step Task in this study, the criterion task, will require subjects to list and describe problematic situations in their lives which reflect their fears, resentments, or wrongdoings. This task is called a "simulated" 4th Step Task because it is a shortened version of a typical 4th Step and because it will be performed by subjects who are neither in AA nor "working" the 12 Steps.

The intervention used in this study to facilitate performance of the 4th Step will be a videotape using Cognitive Modeling procedures, grounded in Social Learning Theory (Bandura, 1977). This videotape will tell and show subjects how to do the "Simulated 4th Step Task." Using a three-group, posttest only design, this intervention will be tested against a control condition as well as the most feasible laboratory version of its real-world counterpart--written quotes from AA's literature telling how to do the 4th Step.

The Significance of the Study

If the intervention in this study proves effective in increasing 4th Step performance in a test population of student subjects, videotapes could then be produced for people in 12-Step programs as well as alcoholism treatment facilities which include the 12 Steps as a treatment component. Also, this videotape could be modified for use in

psychotherapy, initially as an exploratory or data gathering device, and perhaps eventually as an assessment instrument. Just as in family therapy, where genograms are sometimes used to help therapists and clients gather information and see patterns in their families' behavior, a videotape-assisted, self-description task similar to the 4th Step could prove useful for individual therapy.

The Institute of Medicine of the National Academy of Sciences has called for quality research on the impact and mechanisms of AA" (Petrakis, 1987). This study aligns itself with this purpose. With the exception of Anderson and Gilbert's (1989) empirical study of the 4th and 5th Steps of AA, no empirical work has been done on the 4th Step. Anderson and Gilbert's intervention was successful in improving 4th and 5th Step performance, but the intervention was expensive, requiring the use of computer feedback equipment and professional facilitators who taught communication skills to alcoholics. If the intervention in the current study is successful, it will make a cost-effective contribution to the recovery of AA members as well as members of other 12-step programs.

CHAPTER II LITERATURE REVIEW

This chapter reviews the background literature pertaining to the topic areas of this study. Problem-solving is the first topic to be discussed because it provides a framework for understanding how the 12 Steps and, in particular, the 4th Step, work. Next is a description of the 12 Steps, how the steps build on each other, and how a person works them. The emphasis in this discussion will be placed on the 4th Step. Following this is a section on shame and its link to the 4th Step. Next, there will be a section on Social Learning Theory which is the theoretical underpinning for using Cognitive Modeling techniques in this study's intervention. Finally, research findings in Social Learning and their implications for the development of this study's Cognitive Modeling intervention to teach the 4th Step will be discussed.

Problem-Solving and Its Relation to the 4th Step

This section describes D'Zurilla's problem-solving model (1971) and reviews the research on how improving performance in early stages of this model can enhance performance in subsequent stages. The problem-solving literature serves this study in two ways. First, the problem-solving model

provides a broad understanding of the 12-Step model because both are cohesive wholes--each have sequential steps building and relying upon a previous step. The AA slogan, "Prepare, and then execute," illustrates this point. The more specific purpose served by the problem-solving model is to give a rationale for targeting the first two parts of the 4th Step with this study's intervention--listing and describing one's resentments (recurrent angers), fears, and the harm one has done to others. These two parts of the 4th Step are the foundation for the rest of the 4th Step that involves identifying (labeling) one's wrongdoings associated with the problems listed earlier, adopting a spiritual attitude of forgiveness toward others, and formulating ideals for thinking and behaving in the future. In the first two parts of the 4th Step a person generates personal data by listing and describing one's problems so that by means of the rest of the 4th Step one can discern one's problem patterns and then formulate an appropriate response. Without these data generated by the first two parts of the 4th Step, there are no patterns to discern.

The last two parts of the 4th Step (labeling one's shortcomings and forming an attitude of forgiveness while formulating new ways of behaving) are not purely a problem-solving task; they are a spiritual exercise and, as such, are beyond the scope of this study. However, the first two parts of the 4th Step are essentially a "fact-finding, fact-facing

process" (Alcoholics Anonymous, 1976), and do indeed map onto part of the problem-solving model.

The Problem-Solving Model

D'Zurilla and Goldfried (1971) stated that much of what clinicians view as "abnormal behavior" or "emotional disturbance" can be viewed as ineffective behavior and its consequences. They developed the five-stage model of problem-solving discussed in the following section as a clinical tool to improve clients' decision making processes in difficult social situations. D'Zurilla and Goldfried emphasized the situational rather than the intrapsychic aspects of problem behaviors; they defined a problem as a specific situation to which one must respond in order to function effectively in one's environment. They defined a solution as a response or pattern of responses that alters a situation so that it is no longer problematic. D'Zurilla argued that clinical psychology should emphasize the training of clients in effective problem-solving rather than attempt to intervene in the intrapsychic causes of problems (D'Zurilla, 1986).

D'Zurilla and Goldfried (1971) reviewed the work of numerous problem-solving theorists and researchers and concluded that the following five stages represent a consensual view of the components of the problem-solving process. The first stage in D'Zurilla and Goldfried's (1971) problem-solving model is the general orientation, or "set" that one takes toward a problem. This set influences an

individual's response to problematic situations. D'Zurilla stated that the orientation most likely to produce independent problem-solving behavior should include the set or attitude to see problems as normal and to recognize problematic situations when they occur (D'Zurilla & Goldfried, 1971).

The second stage in the problem-solving model is called problem definition and formulation. This is the stage that is most relevant to the performance of the Simulated 4th Step Task in the current study. These authors state that "the need for specificity and comprehensiveness in describing the details of the problem cannot be overstated" (D'Zurilla & Goldfried, 1971, p. 113). The problem solver must avoid using vague or ambiguous terms in order to ensure the effectiveness of subsequent problem-solving stages. Stating the problem specifically and concretely forces the individual to identify information that is relevant to solving the problem (D'Zurilla & Goldfried, 1971).

The third and fourth stages of the D'Zurilla and Goldfried problem-solving model involve the generation of possible solutions and the selection of the best solution based upon predictions about the consequences of each option. Parts of the rest of the 4th Step, such as "shaping a sane and sound ideal for our future sex life" (Alcoholics Anonymous, 1976, p. 69), are analogous to D'Zurilla's third and fourth stage but are beyond the scope of the current

study. Finally, the fifth stage of the problem-solving model involves assessing the actual outcome of the chosen solution so as to make self-correction possible. This stage is similar to AA's 10th Step, "Continued to take personal inventory and when we were wrong promptly admitted it" (Alcoholics Anonymous, 1976, p. 59), and as such is beyond the scope of this study.

The Need for Problem-Solving Training

The ability to accurately and specifically describe a problem has long been acknowledged as necessary for successful problem solving. Einstein and Infeld (1938) stated it is often more critical to formulate a problem than to carry out its solution which may only be a matter of experimental or mathematical skill. Mahoney and Kenigsberg (1980) considered the clear specification of a problem to be a "critical prerequisite to problem analysis" (Mahoney & Kenigsberg, 1980, p. 334).

Several empirical studies have found weaknesses in people's problem-solving styles, raising the question of whether problem-solving skills are trainable. Goldfried and D'Zurilla (1969) assessed problem-solving effectiveness among college students and reported subjects tended to describe their solutions to problems in vague or general terms rather than in terms of specific behaviors. To address this tendency toward a lack of specificity in problem-solving, Maier (1960) advocated training people to state their problem

solutions in terms of specific actions rather than general strategies.

In addition to the empirical evidence just mentioned that problem-solvers tend to be vague, another study found that problem-solvers tend to skip the early problem identification stage and go directly to the more advanced generation of solutions stage. Clinton (1981), in her study of problem identification skills of instructional supervisors, gave supervisors examples of acceptable problem identification statements and then asked them to write their own problem identification statements. Only 25% of all statements submitted by the supervisors identified the problem. Most were problem solution statements specifying a particular action to be taken and usually reflecting a narrow or inaccurate perception of the problem.

Bloom and Broder (1950) investigated the problem-solving styles of college students to discover differences between successful and unsuccessful problem-solvers. Of the many essential problem-solving skills identified by their findings, three are particularly relevant to the Simulated 4th Step Task in the current study: (a) understanding what the directions ask for and thus what the problem requires, (b) the ability to apply relevant knowledge to the problem by translating abstract terms into concrete terms, and (c) the ability to apply separate criteria to separate parts of a problem without distraction. The Simulated 4th Step Task

requires (a) that subjects understand the directions to the task requiring them to list and describe their personal problems (similar to number 1 above), (b) that subjects translate vague or abstract descriptors of their problems into concrete terms (similar to number 2 above), and (c) that subjects first identify and then apply the criterion of being specific/concrete when describing an item (similar to number (c) above).

The Effects of Problem-Solving Training

The past decade has seen several studies testing the effects of training in certain stages of D'Zurilla's problem-solving model upon overall problem-solving effectiveness. Results of these studies support the notion that improving performance in one part of the model can improve overall problem-solving effectiveness. For example, Nezu and D'Zurilla (1979) found comprehensive instruction in specific criteria for evaluating the consequences of a given solution to a problem (Stage 4) significantly increased subjects' overall problem-solving effectiveness, compared to subjects who were only given the utility rule (told to think of a solution to the problem that was "useful").

Two later studies by Nezu and D'Zurilla (1981a, 1981b) found training in isolated stages of the problem-solving model enhanced performance in subsequent stages of the model. In their first study, Nezu and D'Zurilla (1981a) found subjects who received specific, detailed training in problem

definition and formulation (Stage 2) performed significantly better in the decision-making stage (Stage 4) than subjects who received only general guidelines for problem definition and formulation. In their second study, Nezu and D'Zurilla (1981b) found training in problem definition and formulation (Stage 2) increased performance in Stage 3 of the model, generating alternatives. Subjects' performance in the alternative generating stage of the model was operationalized as low, moderate, and high effectiveness of the alternative solutions generated, as rated by Ph.D. clinical psychologists who were blind to the subject's condition and experimental hypothesis. The results from these two studies suggest training in one stage of the problem-solving model can influence performance in a later stage as well as overall problem-solving effectiveness. Also, these studies suggest specific, detailed instruction is more effective than merely giving general guidelines for improving performance in individual stages of the model as well as in overall problem-solving effectiveness.

In summary, there is theoretical and empirical support in the problem-solving literature for targeting performance on the first two parts of the 4th Step with this study's intervention. As some researchers argue, problem-solving training may improve immediate, posttest performance on criteria measures, but because it is extremely difficult to train people to think differently, it does not necessarily

generalize or have long-term effects on people's problem-solving abilities (Griggs, personal communication, June 12, 1991). The 4th Step is not training in problem-solving. People who work the 12 Steps return many times to the 4th Step throughout their lives, using it as a procedural template to describe and formulate responses to their problems.

The 12 Steps of Alcoholics Anonymous

This section provides a synopsis of the 12 Steps of Alcoholics Anonymous. Although the focus is upon AA and alcoholics, the 12 Steps are virtually identical in other 12-Step programs. Each step is listed and described so that it can be seen how the 4th Step fits into the overall 12 Step program. These are the 12 Steps:

1. We admitted we were powerless over alcohol--that our lives had become unmanageable.
2. Came to believe that a Power greater than ourselves could restore us to sanity.
3. Made a decision to turn our will and our lives over to the care of God as we understood Him.
4. Made a searching and fearless moral inventory of ourselves.
5. Admitted to God, to ourselves, and to another human being the exact nature of our wrongs.
6. Were entirely ready to have God remove all these defects of character.
7. Humbly asked him to remove our shortcomings.
8. Made a list of all persons we had harmed and became willing to make amends to them all.

9. Made direct amends to such people wherever possible except when to do so would injure them or others.
10. Continued to take personal inventory and when we were wrong promptly admitted it.
11. Sought through prayer and meditation to improve our conscious contact with God as we understood Him, praying only for knowledge of His will for us and the power to carry that out.
12. Having had a spiritual awakening as the result of these steps, we tried to carry this message to alcoholics and to practice these principles in all our affairs (Alcoholics Anonymous, 1976).

Step 1 ("We admitted we were powerless over alcohol-- that our lives had become unmanageable") is considered a prerequisite for recovery and self-reconciliation. "Unless this step is taken the rest of the Twelve Steps are unnecessary" (Ramsey, 1987, p. 97). Because of the threat of humiliation, many alcoholics struggle with this step, but it is part of the surrender process in AA that some writers consider to be therapeutic (Tiebout, 1944; Kurtz, 1987; Ramsey, 1987; Potter-Efron, 1989). "Our admissions of personal powerlessness finally turn out to be firm bedrock upon which happy and purposeful lives may be built" (Alcoholics Anonymous, 1953, p. 21).

Step 2 ("Came to believe that a power greater than ourselves could restore us to sanity") implies that the alcoholic must first admit that he or she is insane. In the jargon of AA, insanity is defined as "continuing to do the same thing (drinking) over and over but expecting different results" (L. D. Fols, personal communication, September 7,

1990). The 2nd Step encourages the alcoholic to conceive of a "Higher Power" in any way he or she wishes. For example, many members who are atheists or agnostics upon coming into AA are encouraged to use the AA group itself as their "Higher Power" because by using the group's support they can remain abstinent longer than they were previously able to do on their own. Many members report feeling a great sense of relief after working the Second Step (Alcoholics Anonymous, 1976).

Step 3 ("Made a decision to turn our will and our lives over to the care of God as we understood Him") is another step at which the beginner encounters resistance because when first considered, this step often smacks of refusing to take responsibility for one's life. Fellow AA members encourage beginners to take this step by sharing their own experience with Step 3, which is often that they experienced increased personal power from working this step because they learned to let go of trying to change those things in their lives that were beyond their power to change. One's drinking problem is the first of many of the alcoholic's problems to which the 3rd Step applies. As such, one's drinking becomes a "test case" upon which the beginner can try out the Steps. Many beginners find that once they turn their drinking problem over to their "Higher Power", the obsession to drink leaves them (Alcoholics Anonymous, 1976).

The first three Steps are mostly external in their focus. They have been summarized by AA members as "I can't," "He can," and "I'll let Him" (R. Keyser, personal communication, June, 1988). However, the AA text stresses that the first three Steps have little permanent effect "unless at once followed by a strenuous effort to face, and to be rid of, the things in ourselves which had been blocking us. Our liquor was but a symptom. So we had to get down to causes and conditions" (Alcoholics Anonymous, 1976, p. 64). The words "blocking us" in the previous quote refer to blocking the alcoholic from receiving strength from a "Higher Power"---strength needed to stay sober. It is Steps 4 through 9 that constitute this strenuous effort to change oneself with the help of a "Higher Power." Beginners are reminded that the Steps are ideals to strive for and to try to adhere to, not to master. "No one among us has been able to maintain anything like perfect adherence to these principles. We are not saints, the point is that we are willing to grow along spiritual lines" (Alcoholics Anonymous, 1976, p. 60).

Step 4, "Made a searching and fearless moral inventory of ourselves," is discussed in detail in a later section. Step 5, "Admitted to God, to ourselves, and to another human being the exact nature of our wrongs," involves disclosing the character defects identified in Step 4 to another person. In Step 5 one discloses the entire contents of one's 4th Step inventory to their "Higher Power" and to another person.

This is often done with one's "sponsor," another AA member who informally agrees to help another alcoholic to work the 12 Steps. AA's text states, "This feeling of being at one with God and man, this emerging from isolation through the open and honest sharing of our terrible burden of guilt, brings us to a resting place where we may prepare ourselves for the following Steps toward a full and meaningful sobriety" (Alcoholics Anonymous, 1953, p. 62).

Steps 6 and 7 ("Were entirely ready to have God remove all these defects of character" and "Humbly asked Him to remove our shortcomings") are both a response to the problems identified in the previous two steps and a preparation for the subsequent two steps. Just as Steps 2 and 3 are a spiritual response to the drinking problem identified in Step 1, Steps 6 and 7 are a spiritual response to the character problems identified in Steps 4 and 5. Concerning one's character defects, Steps 6 and 7 involve an attitude change from "No, I can never give this up" to "Yes, I will try" (Alcoholics Anonymous, 1953). Similarly, just as Steps 2 and 3 are preparation for Steps 4 and 5, Steps 6 and 7 are preparation for Steps 8 and 9, listing and making amends to other people. In both cases--early in the 12 Steps as well as later--the alcoholic is encouraged to first seek spiritual strength and then to launch out on a vigorous course of action. Steps 1 through 3 can be thought of as "giving up"; Steps 4 through 9 can be thought of as "cleaning up"; and

Steps 10 through 12 are often referred to as "growing up" (M. Mulligan, personal communication, January 14, 1990).

Step 10 ("Continued to take personal inventory and when we were wrong promptly admitted it") constitutes a daily way of living, a condensed cycle of Steps 4 through 9. Having cleaned up as much of the past as is possible by means of Steps 4 through 9, one remains alert for daily manifestations of one's "character defects" (problems in relationships with others and with one's self) and responds by making the appropriate amends. Step 10 is practiced daily so that self-searching becomes a regular habit (Alcoholics Anonymous, 1953).

Step 11 ("Sought through prayer and meditation to improve our conscious contact with God as we understood Him, praying only for knowledge of His will for us and the power to carry that out") involves developing the daily habit of prayer and meditation which AA considers to be an "unshakable foundation for life" (Alcoholics Anonymous, 1953, p. 98). AA encourages members to use their intuition as well as their reasoning in making daily decisions. Referring to Step 11, the basic text of AA states, "We are often surprised how the right answers come after we have tried this for a while. What used to be the hunch or the occasional inspiration gradually becomes a working part of the mind" (Alcoholics Anonymous, 1976, p. 86).

The 12th Step ("Having had a spiritual awakening as the result of these steps, we tried to carry this message to alcoholics, and to practice these principles in all our affairs") is the heart of the mutual-help mechanism discovered by Bill Wilson and Bob Smith, AA's first two members. Early AA members with only a few days or weeks of sobriety were amazed to find that they themselves had become useful for helping newcomers and in doing so caused their own drinking obsessions to disappear (Alcoholics Anonymous, 1976). A popular AA expression about sobriety is "You've got to give it away to keep it" (T. Gund, personal communication, August, 1987).

The 12 Steps are a collection of spiritual, cognitive, behavioral, and interpersonal principles. They form a logically ordered sequence, epitomizing an approach of "prepare, then execute." For many alcoholics, as well as for people in other 12-Step programs, the 12 Steps have made important contributions to profound personal change. The 4th Step is a tool that enables people to face themselves and to accurately describe themselves. Personal change is meaningless unless one is aware of one's starting point.

Research on the 12 Steps

Unfortunately, very little empirical research has been done on the 12 Steps, neither examining why they might be effective nor whether they are effective. To design a study in which one group of subjects received all other aspects of

the AA program (social support, meetings, etc.) except the 12 Steps, and another group received all aspects of AA including the 12 Steps would be impossible because the Steps are woven into every aspect of the AA program. What little empirical work has been done on the 12 Steps has been correlational studies. Two such studies will be briefly mentioned here.

McCown (1989) examined the relationship between impulsivity, empathy, substance-free lifestyle, and participation in 12-Step groups. Impulsivity correlated positively with the total number of substance abuse "slips" (drinking or using drugs again after a period of abstinence) and negatively with the total number of months of substance abstinence. Empathy correlated positively with the length of abstinence and number of hours spent in 12-Step groups per week. Although empathy may be a reasonable way to operationalize spiritual attitudes members of 12-Step groups strive for by working the Steps, one cannot make any causal inferences from this study about isolated effects of the 12 Steps themselves.

Sheeren (1988) asked recovering members of AA to complete questionnaires assessing the occurrence of relapse and their levels of involvement in AA. Depending upon their answers to the relapse question, subjects were placed in either a relapse or a no-relapse group. The level of AA involvement (meeting attendance, working the steps, reaching out to others, and reading AA literature) was found to be

significantly related to relapse. Those in the relapse group rated themselves lower than nonrelapsers in every area of involvement listed on the questionnaire; however, no analyses were performed to compare the relative effects of individual components of involvement.

Research on the 4th Step

A study by Anderson and Gilbert (1989) is the only empirical research that has been done on the 4th Step. The purpose of their study was to determine whether performance of Steps 4 and Steps 5 (writing a personal inventory and then disclosing it to another person) could be facilitated by teaching communication skills. Forty-five male, inpatient alcoholics in a Veterans Administration Medical Center were randomly assigned to one of three conditions: a communication skills training group, a discussion group, and an assessment-only group. Both treatment groups received 8 hours of treatment, conducted over six sessions during the course of the patients' 28-day treatment program. The communication-skills group received a behaviorally-oriented communication skills program, focusing on discrete communication behaviors that were taught through group discussions and communication-skills practice using feedback from a computer monitor. Subjects practiced talking to another person while watching for feedback on the monitor that would flash messages to them concerning positive or negative communication behaviors they were emitting. All subjects met objective competence levels

for each stage of the training that progressed from practicing within any topic subjects chose to practicing only within topic areas related to subjects' "moral inventories." Subjects in the discussion group received focused discussions on Steps 4 and 5, supplemented by written material on these steps. They received no specific behavioral training. Subjects in the control group received only that treatment normally provided to patients in the inpatient alcoholism treatment program which included weekly "12-Step Study" sessions.

Dependent variables in Anderson and Gilbert's study were trained raters' scores on multiple dimensions of subjects' performances in pre- and posttreatment videotaped role-plays during which they were asked to pretend they were talking to their AA sponsor, sharing their personal inventories. The five dimensions rated were (a) level of self-disclosiveness (low versus high), (b) topic focus (external versus internal), (c) personal responsibility taking, (d) topic-congruent affect, and (e) relating drinking behavior to character (nonalcohol related talk versus alcohol related talk). A composite skill variable was calculated by summing the scores from the five component behaviors.

Analyses of covariance on each of the role-play dependent variables using group as the independent variable and pretest scores as the covariate were followed by multiple comparisons of adjusted cell means. The Ancovas were

significant for five of the six dependent variables (all but self-disclosure). The communication skill group outperformed the discussion group, which outperformed the control group on composite skill, internal versus external focus, personal responsibility taking, and congruent affect. Anderson and Gilbert (1989) concluded that a communication skills training program can improve the self-analysis (Step 4) and self-disclosure (Step 5) in hospitalized alcoholics more than discussion groups or assessment-only control groups. The authors stated that if Steps 4 and 5 are to be a part of alcoholism treatment, then the skills inherent in completing those steps should be taught.

The study of Anderson and Gilbert (1989) supports the notion that some of the behaviors inherent in Steps 4 and 5 are trainable. Furthermore, they identified being specific as one of the communication skills on which they were trying to improve performance. However, Anderson's study intervened on 2 of the 12 Steps at once, which meant they had to use a necessarily limited number of criterion variables to assess the performance of a complex task. Although the authors provided a valuable contribution by performing an empirical study on the 12 Steps, their focus was more on the "end product" of the process of Steps 4 and 5 rather than on the fundamental preparation that happens in the early parts of the 4th Step. As will be shown in a subsequent section analyzing how to do the 4th Step, listing and describing

one's problems are discrete tasks that provide essential preparation for the remainder of the 4th Step and for all of the 5th Step.

The current study will focus in more detail on the communication skill of being specific because it is essential to describing one's problems in detail. The subjects in Anderson and Gilbert's (1989) study knew the training was for the 4th Step of AA. Some were attending AA meetings as part of their treatment and some were not. The study did not control for attitude differences toward AA. Furthermore, because an Anova conducted on subjects' pretreatment drinking data revealed that the communication skills group had experienced significantly fewer adverse consequences from their own drinking, subjects may have had different attitudes toward AA and drinking, across groups. The current study uses a heterogeneous sample of college student subjects who will not know they are performing a task that is related to the 12 Steps. This study will determine whether listing and describing one's personal problems can be facilitated using a Cognitive Modeling intervention.

Before describing the 4th Step in detail in the next section, it is important to address the issue of whether the 4th Step has a positive effect upon people who work it. Although there is no empirical evidence that the 4th Step is beneficial, it is interesting to consider what some AA members say about their own experiences with working the 4th

Step. The following statements were made by AA members with more than 5 years of continuous sobriety, who responded anonymously to a written request to retrospectively share in writing their experiences with the 4th Step (personal communications, April, 1991):

1. "It helped me see repeating patterns in my relationships--mistakes and poor choices I had made over and over."
2. "It helped me begin to believe that I wasn't uniquely bad, and in fact was probably not nearly as bad as I had always feared."
3. "It made me become firmer in my resolve to change, to do better--I felt sad and ashamed of the hurt I had caused people I loved."
4. "Putting it down in writing gave words to the self-hurt I had been drinking to not feel. It was cathartic. It put secrets out of me and onto paper, showing me that I had a choice to keep them and stay miserable or let them go."
5. "It helped me see that I had set myself up for pain over and over, that I had tried to please others at any cost to me."
6. "I felt as though I could hold my head up high."
7. "All of a sudden I knew that I never had to do all that stuff again."

The 4th Step of Alcoholics Anonymous

The Purposes of the 4th Step

Having admitted to powerlessness over alcohol and unmanageability of a life run on self-will alone (Step 1), having developed trust in a "Higher Power" (Step 2), and having made a decision to relinquish self-will as the sole guiding force in one's life (Step 3), the AA member has

reached Step 4, "Made a searching and fearless moral inventory of ourselves." The 4th Step is a "strenuous fact-finding and fact-facing process" through which alcoholics "search out the flaws in our make-up which caused our failure" (Alcoholics Anonymous, 1976, p. 64).

One major purpose of Step 4--the one this study addresses--is to accurately identify realities about the self that are difficult to face but are the cause of the alcoholic's problems. AA compares Step 4 to a business inventory, the purpose of which is "to discover the truth about the stock-in-trade . . . to disclose damaged or unsalable goods" (Alcoholics Anonymous, 1976, p. 64). This passage refers to "character defects," construed by AA as natural instincts (e.g., the need for material and emotional security or the need for esteem from others) blown out of proportion and thus causing dysfunctional behaviors, thoughts, and feelings (Alcoholics Anonymous, 1953). Additional purposes of the 4th Step are to enable one to perceive the futility and destructiveness of resentment, to facilitate the development of a spiritual attitude of tolerance and good will toward all people inspite of their own flaws which may have caused harm to others, and to formulate ideals to guide one's future actions, thoughts, and feelings (Alcoholics Anonymous, 1976, p. 70).

How the 4th Step is Pivotal to the 12-Step Program

The 12 Steps are interdependent. To do the 4th Step thoroughly, one must have worked the first three Steps well, and to do Steps 5 through 9 successfully depends upon having done Step 4 well. Given the challenging and even threatening nature of the 4th Step (Anderson & Gilbert, 1989), it may be that alcoholics need the first three Steps as preparation for the 4th Step. The process of developing a trust in a "Higher Power" may give alcoholics the courage and hope they need to candidly assess their character defects.

Working the 4th Step thoroughly is essential if one is to reap the benefits of Step 5, "Admitted to God, to ourselves, and to another human being the exact nature of our wrongs." The value of Step 5 lies in removing some of the alcoholic's guilt and isolation. This is achieved by establishing a close relationship with a fellow alcoholic with whom one can share one's shortcomings and then be accepted by that person as one really is. "The special and confidential relationship that two 12-Step members enjoy with each other is the very heart of the 12-Step fellowship" (Muhleman, 1987, p. 292). Because this relationship is formed through the intimate process of disclosing highly confidential information, its formation depends upon the alcoholic's first identifying his or her specific problems. Specificity in the 4th Step is important because disclosing specific self-statements rather than vague generalities

during the 5th Step maximizes the intimacy of the act (Cozby, 1973).

Steps 6 and 7 involve obtaining the willingness to change and the humility to admit that one needs help to do so. These steps also depend upon the successful completion of the 4th Step because they lack meaning unless the alcoholic knows exactly what he or she needs to gain the willingness to change. In addition to becoming willing to change in Steps 6 and 7, one also discovers those aspects of the self that one cannot or will not change. Once this happens, the difficult task of self-acceptance has begun. The healing begins when one accepts that one will always be imperfect (Potter-Efron, 1989). Steps 6 and 7 refer to "the serenity to accept the things I cannot change, the courage to change the things I can, and the wisdom to know the difference" in AA's Serenity Prayer (Kurtz, 1979). This opportunity for therapeutic awareness will be lost if in Step 4 one has failed to identify "shortcomings" that may or may not be changeable. Finally, because Steps 8 and 9 involve making amends to people whom the alcoholic has harmed, they attenuate guilt and shame, thus removing some of the stimuli for destructive drinking behavior. If Step 4 is not done accurately and thoroughly, those people who have been harmed will remain unidentified, and the alcoholic cannot "clear away the wreckage of the past" (Alcoholics Anonymous, 1976, p. 164).

How to Do the 4th Step

The following description in this section (including all quotes) of how an AA member does the 4th Step is a careful summary based solely on AA's basic text, Alcoholics Anonymous (Alcoholics Anonymous, 1976, pp. 64-71). Other 4th-Step "guides" to help alcoholics work the 4th Step have been published (e.g., Hazelden, 1973); however, such aids are not official AA literature.

To do a 4th-Step inventory an AA member lists and describes one's character defects in three major areas: resentments, fears, and harm done to others. Resentments, "the number one offender," are chronic or recurrent angers directed at "people, institutions, or principles" (Alcoholics Anonymous, 1976, p. 64). Fear is construed as a dysfunctional level of the otherwise normal emotion. These exaggerated fears are attributed to the failure of self-reliance and the lack of trust in a "Higher Power" and as such are seen as linked to many of the alcoholic's problems (Alcoholics Anonymous, 1976, p. 68). The third major category for consideration in the inventory is harm done to others, with an emphasis upon sex conduct. AA encourages members to inventory their own behavior in past and current sexual relationships to form a "sane and sound ideal for our future sex life" (p. 69).

In taking a personal inventory, one writes three separate lists, one each for resentments, angers, and harm

done to others. Each of these three lists has two separate columns. The left column is devoted to stating the problem, and the right column is devoted to describing it (this may include one's own behaviors, thoughts, or feelings and/or those of others). In the left column under resentments one might write, "I'm mad at my boss." In the left column under fears one might write, "I'm afraid of facing an IRS audit." In the left column under harm done to others one might write, "I hurt my ex-wife." In the right column under resentments one might write, "because he confronted me on a mistake I made in the office." In the right column under fears one might write, "because I cheated on my taxes and I am afraid of being caught and punished." In the right column under harm done to others one might write, "because I slept with another woman." Although there is more to Step 4 than writing these two columns, these two parts of the step (listing and describing problems) are the foundation of the 4th Step that the current study addresses.

The rest of the 4th Step involves a careful analysis of one's wrongdoings associated with each of the three major categories described above. AA encourages its members to identify problematic patterns among the items they have listed in the first two parts of the 4th Step, thereby labeling their "character defects." For example, one might identify "false pride" as the cause of one's problems with the boss (in the example above). As part of this analysis,

one acknowledges the futility and destructiveness of resentment, exaggerated anger, and harming others. This acknowledgment happens concurrently with practicing a spiritual attitude of acceptance and forgiveness of other people's imperfections. AA members are encouraged to use prayer and to practice this spiritual attitude to help them formulate ideals for their future behavior.

In AA, acknowledging one's own wrongdoings concerning a given event is called "taking your own inventory," whereas identifying the wrongdoings of others is called "taking the other person's inventory." In the first two parts of the 4th Step (listing and describing problems) it is acceptable in the case of the resentment and fear lists to "take the other person's inventory" as well as one's own. The important thing is to describe one's problems specifically, even if they pertain to the wrongdoings of other people. Therefore, up to this point in the 4th Step, one's inventory will have generated lists of problems and descriptions of them that contain a mixture of one's own wrongdoings as well as the wrongdoings of others.

A careful reading of AA's text to this point (listing and describing) finds no instructions to "take one's own inventory" in relation to one's resentments and fears--this comes later. However, in the case of harm done to others, it is obviously necessary by this point to have listed one's own wrongdoings because, by definition, one cannot describe an

incident of harm done to another person without listing one's own behaviors associated with that event. No analysis of the written material is performed until the first two parts (list and describe) of the 4th Step are complete: "We went back through our lives. Nothing counted but thoroughness and honesty. When we were finished we considered it carefully" (p. 65). This careful analysis is the remainder of the 4th Step (mentioned above) and is beyond the scope of this study.

In summary, if one has thoroughly and specifically analyzed one's character defects, accepted that the world is full of imperfect people, and formed behavioral ideals to strive for, one is ready to proceed to Step 5: "Admitted to God, to ourselves, and to another human being the exact nature of our wrongs."

Why the 4th Step Might Be Difficult To Do

The 4th Step requires one to admit and describe one's shortcomings or wrongdoings in specific detail. The more specifically one describes one's problems, the more one acknowledges that they are their own problems and can begin to assume responsibility for changing them. Some writers consider self-searching difficult for alcoholics to do (D. M. Nathanson, personal communication, June 3, 1991; D. R. Cook, personal communication, June 4, 1991). Self-Awareness Theory (Hull, 1981) holds that alcohol use may be motivated by a desire to avoid painful states of self-awareness. One reason that self-awareness might be painful for some alcoholics is

that they may be abnormally high in shame. Several authors have emphasized the role that shame might play in perpetuating and impeding recovery from alcoholism (Cook, 1987; Flanigan, 1987; Kurtz, 1987; Ramsey, 1987). Whereas guilt is a response to a violation of one's moral or social values and as such relates to behavior, shame is a perceived defectiveness or failure of the self. "Shame is the sense that one is exposed to the world and seen a fraud" (Potter-Efron, 1989, p. 256). If a shamed person feels defective, then assessing one's "character defects" may be perceived as threatening.

Three of the numerous defenses that alcoholics mount against shame are denial, perfectionism, and grandiosity (Ramsey, 1987; Potter-Efron, 1989). Denial might block an alcoholic from working the 4th Step because it is a defense against any uncomfortable feelings or facts. Perfectionism, a distorted urge toward competence and a dread of imminent disgrace, could also block performance of the 4th Step by never letting one start a task that one cannot do perfectly. Grandiosity could also have a detrimental effect on 4th Step performance because a grandiose person might consider the 4th Step task unnecessary or beneath one's dignity (Potter-Efron, 1989).

Shame and Its Possible Association with 4th-Step Performance

Shame is examined in this study because it is a salient clinical topic in alcoholism and substance abuse treatment

(Brown, Peterson, & Cunningham, 1988; Ramsey, 1987; Potter-Effron, 1989; Kaufman, 1989), eating disorder treatment (Rosen & Ross, 1968; Franzoi & Shields, 1984; Offer, Ostrov, & Howard, 1984; Timko, Striegel-Moore, Silberstein, & Rodin, 1986), and the treatment of codependency in people from dysfunctional families of origin (Bepko, 1985; Seixas & Youcha, 1985; Black, Bucky, & Wilder-Padilla, 1986). Some people in these clinical populations attend 12-Step programs such as Alcoholics Anonymous, Narcotics Anonymous, Cocaine Anonymous, Alanon, Overeaters Anonymous, and Adult Children of Alcoholics. Because the 4th Step involves self-focus and self-appraisal, it may be exceptionally difficult for shamed people to do it. This section will first discuss the definitions and theory of shame and then discuss the theoretical and empirical links between shame and addiction.

Definitions and Theory of Shame

Potter-Effron (1989) defines shame as a painful state of seeing one's self as basically defective as a human being. He defines guilt as a painful state of awareness that accompanies actual or contemplated violations of societal values or rules. Shame relates to a person's central identity; guilt relates to the behaviors of that person. Whereas a shamed person often feels inadequate, deficient, exposed, or worthless, a guilty person feels bad, wicked, evil, or remorseful (Potter-Effron, 1989). Retzinger (1987) states shame refers to a distinct family of emotions that

includes humiliation, embarrassment, shyness, self-consciousness, and inferiority.

Tomkin's affect theory (1963, 1987) provides the theoretical foundation for the understanding of shame that is incorporated in this study. For Tomkins, there are nine innate human affects, six of which are negative, two of which are positive, and one of which is neutral. Shame is one of the six negative affects, the others being distress, fear, anger, dissmissal, and disgust. The two positive affects are interest and enjoyment, and the only neutral affect is surprise. According to Tomkins, shame is one of three auxiliary (helper) affects. The two other auxiliary affects are disgust and dissmissal that serve to regulate the hunger drive. Shame is an auxiliary (helper) affect because its primary innate function in all people is to inhibit or depress interest and enjoyment when they are activated. Without proper levels of shame, most people would be on a perpetual, manic "high" (Tomkins, 1963). Other positive values of shame found in the literature are to motivate people to maintain their belongingness to their community (Potter-Efron, 1989), to promote a healthy awareness of human limitation (Kurtz, 1979), and as a mild punishment for failure that motivates people toward personal mastery and general feelings of competence (Potter-Efron, 1989).

Tomkins (1989) distinguishes between shame as affect and shame as emotion. He argues that, like the other primary

affects, shame is a subcortical interaction of biochemical mechanisms that ultimately get expressed on people's faces (Tomkins defined and identified each of the innate affects by their expressions on the human face). Shame as affect occurs when something impedes the normal flow of interest or excitement, such as the sudden withdrawal of a mother's face away from her smiling baby.

Later in life, as language and higher cortical functions develop, innate shame affect becomes combined with cognitions and behaviors into the complex emotion of shame. The experience of shame as an emotion requires the mediation of higher, neo-cortical functions, thus requiring further development of the infant before shame can be regarded as an emotion.

Shame is considered by many authors to be influential in the development of the subjective sense of the self (Cook; 1991; Kaufman, 1989; Lewis, 1987; Nathanson, 1987). Internalized shame is shame affect that has become a part of one's identity (Cook; 1991; Kaufman, 1989). Cook considers the internalization of shame to be a consequence of the repeated and intense triggering of shame over time. This process can begin in infancy or early childhood when caregivers may be unresponsive or rejecting. Internalized shame consists of a family of feelings associated with inferiority, defectiveness, unworthiness, incompetency, threats of exposure, emptiness, alienation, and self-contempt

(Cook, 1991). In summary, Tomkins considers shame to be a key component of human affect because it serves to regulate interest and excitement, the two positive affects.

Furthermore, it can become internalized into the emotion of shame, in differing degrees depending upon the individual's personal history. It is internalized shame that is the focus of this study.

Theoretical and Empirical Links Between Shame and Addiction

Cook (1991) considers it useful to think of internalized shame as both a cause and a result of addiction, but neither the sole cause nor the sole result. Painful feelings of shame may cause addictive behaviors to occur because such behaviors can provide temporary relief from this pain. Contrarily, addictive behaviors may cause an exacerbation of shame that was already internalized before the onset of these behaviors because addictive behaviors can cause repeated failures in the addicted person's life, and repeated failures can lead to the shame feelings of being incompetent or defective.

Peele (1985) defines an addiction as an extreme attachment to an experience that is harmful to the person but which the person is compelled to repeat over and over because the experience feels essential to his or her life. People become addicted to experiences that can either increase positive emotions, decrease negative emotions, or both (Peele, 1985). Examples of experiences that can become

addictive are the use of alcohol and drugs, eating, excitement (gambling and sex), or intense emotional relationships. It is plausible that, in some cases, addictive behaviors are defenses against shame (Cook, 1991). This is not to say, however, that shame is the only negative emotional state addictive behaviors modulate, or the only motive for addictive behaviors is emotional modulation.

Cook (1991) points out several interesting associations between shame, addiction, and attachment (early childhood bonding experiences with primary caregivers). He cites the results of Zucker's review (1986) of 12 longitudinal studies on alcoholism in which Zucker identified six major childhood factors associated with children later becoming alcoholics: (a) childhood antisocial behavior; (b) low achievement during childhood; (c) loose interpersonal ties with parents and siblings; (d) marital conflict between the prealcoholic's parents; (e) inadequate parenting and/or lack of contact with parents; and (f) antisocial, alcoholic, or sexually deviant parents (in Cook, 1991). These patterns strongly resemble the behavior patterns associated with insecurely attached children in the attachment literature (e.g., Erickson, Sroufe, & Egeland, 1985) and the sources of shame in the shame literature (Cook, 1991; Nathanson, 1987).

Werner (1986) conducted a study that provided more support for the view that there are associations between shame, attachment, and addiction. She followed a sample of

children of alcoholics from birth to age 18 to find out what factors were associated with those children in this at-risk population who did not develop serious coping problems by age 18. The three factors she found were ones known from the attachment literature to contribute to secure attachment and positive self-esteem: (a) much attention from a primary caretaker, without interruption, from early infancy; (b) no new births in the family before the age of two; and (c) low conflict between parents during the first 2 years of life. Similar findings emerged from Shedler and Block's longitudinal study (1990) of 18-year olds whom they had followed since age 3. The mothers of those children in the sample who turned out to be drug abusers by age 18 were characterized as relatively cold and unresponsive.

The Assessment of Internalized Shame

Cook (1991) has developed the Internalized Shame Scale (ISS) that is designed to detect intense, internalized shame feelings (see Chapter III). The use of this instrument with several clinical populations, has provided additional empirical support for the shame-addiction association. Clinical populations such as alcohol/drug patients and eating disordered women scored significantly higher on the ISS than nonclinical populations. Cook also found that among a group of alcoholic women those women who had experienced childhood sexual abuse had significantly higher levels of internalized shame than women who were not sexually abused as children.

Finally, in a clinical sample of female alcoholics who were administered the ISS before and after their inpatient alcoholism treatment, ISS scores dropped significantly. However, subjects whose parents had showed them the least caring had the highest shame scores at the end of treatment (Cook, 1991).

Links Between Shame and the 4th Step in 12-Step Programs

Among common defenses to shame identified in the shame literature are two "character defects" directly addressed by the 4th Step: resentment and false pride (Nathanson, 1987; Retzinger, 1987). Retzinger (1987) considers resentment to be a "shame-rage" compound emotion in which one alternates back and forth between shame and rage in rapid cycles. She claims that her (1987) videotaped studies of resentment (operationalized as verbal indicators of longstanding or recurrent angers) document that resentful subjects cycle rapidly back and forth between shame (operationalized as averted gaze) and anger (operationalized as the contraction of specific facial muscles known to correlate with angry states).

Nathanson (1987) links shame to two forms of pride: the healthy version whereby one feels genuinely proud about an authentic success and false-pride with which one defends against or denies one's fragility (p. 204). Nathanson conceives of a continuum between shame and genuine pride along which lie normal and shamed people. He argues that

shamed people try unsuccessfully to master their shame through illusory pride. AA calls such illusory pride "grandiosity" or "false pride," and many AA members target these "character defects" in their 4th Step personal inventories. Additionally, Ramsey (1987) considers grandiosity to be a common defense against shame.

In 12-Step programs, one uses the 4th Step to identify the common manifestations of resentment and false pride in one's life and tries to change the thoughts and behaviors that cause them. Once one has identified and described all of one's resentments and manifestations of false pride (among other character defects) in the 4th Step, one can use the rest of the 12 Steps to heal one's resentment and false pride (Alcoholics Anonymous, 1976). Whether the 12 Steps heal shame itself (Ramsey, 1987) or the resentment and grandiosity that defend against shame (Potter-Efron, 1989), or anything at all, has not been empirically established.

Social Learning Theory

This section begins with a discussion of Bandura's Social Learning Theory (Bandura, 1969, 1977, 1986) that is the foundation for the Cognitive Modeling Videotape intervention used in this study. Next is a discussion of Cognitive Modeling that includes what it is and how it is done. Then, the empirical support for the efficacy of modeling and Cognitive Modeling as used in this study is presented. Finally, the implications of Social Learning

Theory and its related research for this study's Cognitive Modeling intervention are discussed.

Social Learning Theory holds people can vicariously learn a new behavior (also ways of thinking) by observing a model perform the behavior, thereby noting the reinforcements associated with performing the behavior and encoding sufficient information to do it. Bandura (1977) considers any explanation of human learning grounded purely in reinforcement (the positive or negative consequences of actions) to be rudimentary and overly mechanistic. He holds most human learning is not "a mechanistic process in which responses are shaped automatically and unconsciously by their immediate consequences" (p. 17). Instead, he argues that due to their cognitive capacities, humans can profit extensively from their experiences--they are not unthinking organisms. He states reinforcement functions not as a "response strengthener" (as in the mechanistic view to which he objects) but rather that reinforcement functions principally to inform and to motivate the learner (1977).

Whereas reinforcement is effective for regulating behaviors people have already learned, it is an inefficient way to create these behaviors (Bandura, 1977). Bandura holds people rarely learn new behaviors they have never seen performed before, and learning is a complex process combining the influences of reinforcement and behavioral examples that learners observe. Because people can learn many behaviors by

example before performing any overt trial-and-error behaviors, they are spared needless errors. Most human behavior is learned through observation. By observing another person perform (model) a behavior, the learner forms an idea of how to do the behavior. It is this type of imitative, observational learning that Bandura (1977) calls learning through modeling.

Bandura (1977) identifies four processes that are the main components of observational learning (learning from modeling): attention, retention, motor reproduction, and motivation. The level or amount of observational learning obtained is partly determined by the use of appropriate cues for these four processes in the learner. For example, relevant modeling stimuli (e.g., attractive, interesting, knowledgeable models) might cue the learner's attention, or cognitive organization and rehearsal might cue the learner's retention. Other examples include the cueing of motor reproduction by means of self-observation or accuracy feedback from another person, and the cueing of motivation by means of external praise, self-praise, or the self-satisfaction of seeing one has successfully performed a given behavior. Designs for training, teaching, or psychotherapy interventions that intentionally incorporate cues to trigger these component processes of observational learning are grounded in Social Learning Theory.

Bandura never intended Social Learning Theory and modeling to be limited to overt behaviors. He gave equal weight to what he variously called "verbal," "symbolic," or "descriptive" modeling (Bandura, 1969) which involve making one's cognitive processes overt. Clearly, what Bandura meant by "modeling" included the demonstration of both overt behaviors and covert cognitions (1977, 1986). The technique of making one's cognitive processes as well as one's behavioral responses overt for the learner is known as Cognitive Modeling.

Cognitive Modeling

Although behavioral modeling is a popular and effective strategy, it cannot be used to teach covert cognitive skills (Harmon & Evans, 1984). For example, one cannot teach people to analyze a problem and formulate a solution by only demonstrating overt behavior (writing down the solution); the learner could not be made privy to the thinking steps by which the model arrived at the solution. Social Learning theorists refer to those modeling techniques that make one's cognitive processes overt in order to teach conceptual skills, judgment, language, or thought as Cognitive Modeling. Hereafter, the term "Cognitive Modeling" will be used to refer to any modeling intervention that also makes the corresponding mental steps overt. Modeling interventions that exclude such overt mental steps shall be called, simply, modeling.

Cognitive Modeling, used by trainers, teachers, and psychotherapists, is the procedure of showing people what to say to themselves when performing a task or coping with emotional and interpersonal problems (Cormier & Cormier, 1985). Sarason (1973) describes the procedure as "efforts by the model to make explicit for observers the process by which he arrives at the overt responses he makes" (Cormier & Cormier, 1985, p. 379). Covert, cognitive processes are formalized by the instructor/model into an overt, sequence, as if the model were explaining to observers what he or she is thinking during each step of the sequence. Just as the instructor or therapist using behavioral modeling demonstrates a sequence of overt behaviors for the learner, the instructor or therapist using Cognitive Modeling demonstrates a sequence of cognitive steps (Cormier & Cormier, 1985).

According to Harmon and Evans (1984), a good sequential model of the particular mental procedure being taught is the key to successful Cognitive Modeling. Such sequences are necessarily more complex than those used in behavioral modeling. The behavioral modeling instructor need only portray a sequence of overt behaviors; the Cognitive Modeling instructor must portray the behavioral sequence as well as its corresponding cognitive sequence. This covert activity is typically portrayed by means of some graphic media such as

a checklist or sequentially-arranged index cards (Cormier & Cormier, 1985).

Meichenbaum and Cameron (1973) and Cormier and Cormier (1985) have developed step-by-step Cognitive Modeling procedures that include a self-instructional training strategy. Self-instructional training is the part of the model whereby the learner progressively fades out his or her self-talk while learning a task, until the task can be performed with covert self-talk. Self-talk refers to statements the model or learner say to themselves (aloud or silently). Self-talk includes coping statements to deal with difficult parts of the process as well as task-relevant, procedural statements. The authors added self-instruction to their Cognitive Modeling procedures because studies have found that, for some applications, it enhances the Cognitive Modeling training effect (Kendall & Braswell, 1982; Meichenbaum & Goodman, 1971). In Meichenbaum and Cameron's 5-step model shown below, the Cognitive Modeling consists of Steps 1 and 2 and the self-instruction consists of the rest of the model:

1. The model first performs the task while talking aloud to himself or herself.
2. The learner performs the same task (as modeled by the counselor) while the counselor instructs the client aloud.
3. The learner performs the same task again while instructing himself or herself aloud.

4. The learner whispers the instructions while performing the task.
5. The learner performs the task while instructing himself or herself covertly.

The cognitive modeling procedure used in this study will be a modified form of the Meichenbaum and Cameron's procedure. Cormier and Cormier (1985) added to their procedure an initial step of providing the learner with a rationale for using Cognitive Modeling. By explaining the procedure to the learner, this prepares him or her for what is to come, thus avoiding any procedural confusion during the actual learning process. Accordingly, the current study will incorporate this additional step into Meichenbaum and Cameron's model. Also, steps 3 through 5 in Meichenbaum and Cameron's procedure will be combined in this study into one step, whereby the instructor/model simply asks subjects to take time to silently review the steps of the task in their minds. Due to the simple nature of the 4th Step Task in this study, it is anticipated that this modified procedure will be adequate to allow subjects to encode the entire task in their minds and not overload them with unnecessary procedures.

Effects of Modeling and Cognitive Modeling on Social and Personality Variables

A substantial amount of research on modeling and Cognitive Modeling has examined and provided support for their effects on social and personality variables. These variables include phobic responses (Bandura, Blanchard, &

Ritter, 1969), aggressiveness (Demare & Briere, 1988), and altruism (Harris, 1970). Other studies found effects of modeling or Cognitive Modeling on variables such as creativity in adults (Harris & Evans, 1973), test anxiety in college students (Sarason, 1973), self-control in children (Meichenbaum & Goodman, 1971; Kendall & Braswell, 1982), and assertiveness in adults (Kazdin & Mascitelli, 1982). It is interesting that Cognitive Modeling was found effective in remedial training for adults who as part of their visual-spatial development had never mastered Piaget's water-level task, requiring the recognition that the water in all containers is always horizontal (Robert & Chaperon, 1989).

The research reviewed in greater detail in this section concerns two applications of modeling and Cognitive Modeling to dependent variables more closely related to the goal of this study. These two applications are creativity (quantity and divergence of ideas generated) and verbal behaviors (self-reference and affective self-disclosure statements). Idea generation, a component of creativity, is of interest in this study because the 4th Step Task involves generating and listing as many personal problem statements as possible. The literature on self-reference and self-disclosure is relevant to this study because, although the 4th Step Task is not a self-disclosure task per se, the personal statements generated in this task are identical in topic and content to

the self-disclosure statements generated as dependent variables in the studies reviewed here.

Effects of Modeling and Cognitive Modeling on Idea Generation

Harris and Evans (1973) performed a study with male and female college students to determine if exposure to a symbolic model could affect creative behavior, operationalized as the listing of divergent (creative) thoughts versus convergent (noncreative) thoughts. The task that subjects performed was listing as many uses as they could think of for a brick. An example of a convergent (noncreative) response to this task is "to build a wall." Examples of divergent (creative) responses are "to anchor a small boat" or "to keep newspapers on the patio from blowing away." Rather than use live or videotaped models for their experimental conditions, the authors used symbolic models, written samples of creative/noncreative responses. The four treatments were a prolific creative model (many creative examples given), a prolific noncreative model (many noncreative examples given), an inadequate noncreative model (very few noncreative examples given), and a control group using no model.

Regarding the number of creative and noncreative responses emitted, results of the Harris and Evans (1973) experiment indicated that subjects tended to emit the kind of responses they saw modeled, whether they were creative or noncreative. For example, subjects exposed to many creative

examples emitted more creative responses than subjects exposed to either of the other three conditions: many noncreative examples, a few noncreative examples, or no model at all. It is interesting that control subjects who saw no model at all emitted more creative responses than subjects who saw many noncreative examples. Regarding noncreative responses emitted in this experiment, subjects exposed to many noncreative examples emitted more noncreative responses than subjects exposed to either of the other three conditions. Subjects who saw only a few noncreative examples emitted more noncreative responses than subjects who saw many creative examples, or no model at all. Again, it is interesting to note that control subjects exposed to no model at all emitted more noncreative examples than subjects who had seen many creative examples. These results suggest that not only is it possible to train subjects to be more creative, but it is possible to train them to be noncreative as well.

In another study designed to influence college students' creativity, Meichenbaum (1975) compared the performance on numerous creativity measures of a group receiving a Cognitive Modeling/self-instructional intervention to a group receiving Gendlin's (1969) focusing training and a wait-list control group. Subjects in the Cognitive Modeling group received a sequence of discussion, modeling, rehearsal, and practice on creativity tasks using self-instruction. Subjects in the

comparison group received similar discussion, modeling, and rehearsal, but the self-instruction was replaced with focusing exercises asking subjects to attend to their feelings.

One of the dependent measures of creativity Meichenbaum examined was the number of possible consequences subjects could list for novel, hypothetical situations (2 minutes per situation). For example, one item read, "What would happen if all the people in the world lost the ability to reproduce?" This particular dependent measure was among numerous measures of creativity on which the Cognitive Modeling subjects outperformed the comparison and control groups. One of Meichenbaum's conclusions was that modeling films in which creative thinking styles are explicitly modeled for subjects to rehearse may be useful for applications to teaching and psychotherapy.

Gist (1989) conducted a field experiment examining the influence of Cognitive Modeling plus practice versus lecture versus practice on performance of innovative problem-solving, including the quantity and divergence of ideas generated by subjects. In the Cognitive Modeling group, thought patterns corresponding to brainstorming techniques were demonstrated by self-instructive models who encouraged observers to feel comfortable with generating ideas through freewheeling, building on others' ideas, and using unusual cognitive associations. Subjects then practiced brainstorming while

applying these modeled sequences. Pre- and postmeasures were taken on task performance; these tasks involved generating ideas to improve the quality of an organization and the customer service in that organization. The results of Gist's (1989) experiment replicated some of Meichenbaum's (1975) findings on idea generation. The Cognitive Modeling group generated significantly more ideas than the comparison group, and these ideas were significantly more divergent than those generated by the comparison group subjects. Subjects were allowed 15 minutes to complete each idea-generation task, in which time the Cognitive Modeling subjects generated a mean of 12.4 ideas ($SD = 4.5$), and the comparison group generated a mean of 5.8 ideas ($SD = 2.3$).

Effects of Modeling and Cognitive Modeling on Self-Reference and Self-Disclosure

In a study comparing the effect of a videotaped model, an audiotaped model, or a no-model control condition on self-referencing verbal behavior, Myrick (1969) found that both types of models significantly outperformed the controls. Subjects were male and female eighth-grade counseling clients attending their first counseling interview. Prior to entering the interview room, they were exposed to one of the three conditions above. Self-referencing verbal behavior was operationalized as the number of first person pronouns ("I," "me") emitted by subjects during the interview. Myrick concluded that modeling was effective in increasing subject's

self-referencing verbal behaviors in a real counseling setting. No difference in effect was found between the videotaped model and the audiotaped model. The author speculated that this was because the visual stimuli in the videotape had distracted subjects from attending to its verbal content. The study's performance task was perhaps too simple in nature to make the use of a videotape appropriate.

In a study using a more complex criterion variable, Whalen (1969) tested the relative effects of modeling versus instructional treatments on modifying the verbal response classes of subjects in a leaderless group session. She counted the number of subjects' statements that objective raters placed in the verbal response category of "personal statements" versus "impersonal discussion" for all subjects who were in one of four conditions. The conditions were (a) a filmed model of interpersonal openness plus detailed, exhortative and descriptive instructions to be interpersonally open during the subsequent group session; (b) the same filmed model of interpersonal openness plus minimal instructions; (c) the same exhortative and detailed instructions but no filmed model; and (d) minimal instructions only (control condition).

Whalen's results showed that subjects exposed to both the filmed model and the detailed instructions conditions outperformed subjects in the other three groups, who devoted most of their time during the group session to impersonal

discussion. Neither the filmed model alone nor the detailed instructions alone facilitated interpersonal openness. Whalen offered a cognitive explanation of why subjects in the film-only group failed to imitate the filmed model. She said that rather than simple, discrete acts being modeled (as in Myrick's study), complex verbal response classes were being modeled and vague but complex responses were required of subjects. In such a situation, she felt more attention must be paid to orienting subjects toward the relevant variables if imitation is to occur. The instructions to subjects to perform this rather vague self-disclosure task may have confused them, thus attenuating their potential self-disclosure performances. Also, the 12-minute duration of the modeling film may have been inadequate for subjects to observe enough behavioral samples to form a cognitive rule generalizing about the type of behaviors observed. This may have attenuated their imitation performances. This raises the issue of task ambiguity and how it might best be addressed by Cognitive Modeling or instruction.

Marlatt (1971) assessed the effects of task ambiguity on verbal matching behavior in an interview. Verbal matching behavior was operationalized as the number of problems admitted to during subject interviews. Marlatt's 2 X 2 factorial design was as follows. Student subjects either had (behavioral modeling condition) or had not (control condition) heard an audiotaped model mentioning 25 of his

problems. These same subjects also had either received ambiguous instructions to talk about anything they wished in their interviews (high ambiguity condition), or had received less ambiguous instructions to talk about any of five topics given to them as guidelines before the interview (low ambiguity condition). The five topic areas were adjustment to college life, family life, study habits, social life, and university professors. Results of Marlatt's study yielded significant effects for both ambiguity and for modeling, but not for gender of subjects. Additionally, a significant ambiguity X modeling interaction was found. Subjects who admitted to the most problems had been exposed to the model plus the ambiguous instructions.

The issue arising from Marlatt's study is why subjects exposed to the model plus the highly ambiguous instructions discussed more problems than subjects who had been exposed to the model plus specific instructions to talk about certain topic areas. Marlatt concluded that in cases where subjects' expected responses are vague (as in counseling or in the task of this experiment), modeling may be useful for reducing subjects' uncertainty about what the task requires. He added that in such cases, attempts to give subjects specific instructions to do the task are implausible due to the task complexity. Such attempts at giving detailed instructions fall short of their intended goals and only serve to

exacerbate subjects' confusion, thus hindering task performance.

In a related study, Green and Marlatt (1972) compared the effects of modeling and instructional interventions, once again on the modification of verbal behaviors. Before a short interview, student subjects were assigned to one of three conditions: (a) instructions to talk about ideas within specified topic areas (school, family, or social life); (b) instructions to discuss personal feelings within the same topic areas; and (c) a no-instructions control condition. As in the previous experiment (Marlatt, 1971), half of the subjects were exposed to an audiotaped model discussing his feelings within identical topic areas, and half of the subjects were exposed to no model. The operationalized verbal behaviors were the number of feeling statements emitted by subjects during their subsequent interviews.

Results of Green and Marlatt's (1972) experiment indicated that in the analysis of absolute frequencies of feeling statements within targeted topic areas, both instructional and modeling procedures had significantly greater effects than the control group, although there was no difference between the two treatments themselves. Analyses of feeling statements across topic areas (regardless of topic area) revealed that instructions to discuss feelings versus instructions to discuss ideas was the most facilitative treatment--the modeling factor was nonsignificant. However,

the combination of modeling and instructions yielded a greater specificity of effect (for feeling statements within prescribed topic areas) than either treatment alone. Green and Marlatt surmised that the modeling may have served to structure their subject's responses but did so in a generalized manner not specific enough to the targeted responses presented by the model. The authors maintained imposing structure and direction on a vague task can enhance a subject's ability to emit verbal feeling responses that would otherwise be difficult to express.

As reflected by this section of the literature review, it is evident that most of the research on self-disclosure used Behavioral Modeling rather than Cognitive Modeling. Furthermore, these studies occurred in the 1970s, and no self-disclosure studies from the 1980s or 1990s using Cognitive Modeling were found. A single exception to the research pattern of the 1970s is a study by Highlen and Voight (1978) that compared the effects of behavioral modeling with Cognitive Modeling on affective self-disclosure in male undergraduate subjects. The study's four randomly assigned groups were as follows: (a) Behavioral Modeling (a 50-minute videotape consisting of didactic instruction, Behavioral Modeling, overt behavior rehearsal, and a review; (b) Cognitive Modeling (a 50-minute videotape consisting of didactic instruction, behavioral and internal self-statement modeling, overt Cognitive Modeling by subjects watching the

videotape, and a review; (c) attention placebo (audiotaped progressive muscle relaxation); and (d) wait-list control.

Highlen and Voight's (1978) results indicated that both Behavioral Modeling and Cognitive Modeling had significant effects on affective self-disclosure, operationalized as the amount and quality of verbal feeling statements emitted by subjects in their verbal responses to hearing audiotaped role-plays of diverse interpersonal situations. Although the Cognitive Modeling group did not significantly outperform the behavioral modeling group, there was a strong but nonsignificant trend in that direction, $F(5,40) = 2.33$, $p < .06$. Gist (1989) speculated the cognitive modeling intervention may have addressed subjects' skill deficits more directly than the behavioral intervention did.

In summary, Cognitive Modeling has been empirically shown to be effective in teaching subjects to generate ideas and to elicit self-reference behaviors. These research findings were applied to the production of the Cognitive Modeling videotape used as an intervention in this study. A detailed description of the Cognitive Modeling features of this videotape is provided in the Instruments section of Chapter III. The following section discusses in a more general way the elements of Social Learning Theory that will be incorporated in this videotape.

Implications of Social Learning Theory and Research for the Cognitive Modeling Videotape to Improve 4th-Step Performance

Whether to use Cognitive Modeling, behavioral modeling, or didactic instruction for the intervention in this study was carefully considered. The Simulated 4th-Step Task that subjects in this study will perform is largely a covert cognitive process. It requires they first generate and list problems in specified topic areas (resentments, fears, and harm done to others) and then specifically describe these problems. Cognitive Modeling, which makes overt a model's covert thoughts, may enable subjects to think themselves through this task better than they might do with the benefit of written instructions or merely Behavioral Modeling.

Whether to use videotaped Cognitive Modeling rather than the less expensive or time-consuming alternatives of symbolic (written) or audiotaped Cognitive Modeling was also given much consideration. In the case of Cognitive Modeling, audiotaping or videotaping media are superior to the written medium because it may be cumbersome or confusing for a subject to attend to and process the narrator's task-related thoughts in conjunction with task-related instructions and examples--all in written form. The videotape medium is considered superior to audiotape for the 4th-Step Task because it provides the opportunity to visually illustrate the learning points by using written examples of vague versus specific 4th-Step Task items. Data from previous studies

(e.g., Bandura, Ross, & Ross, 1963) indicated that filmed models can be as potent as live models in eliciting imitative behavior. Furthermore, a videotaped intervention is more cost-effective than using live models.

The Cognitive Modeling Videotape used in this study cued all four of the components of imitative learning in Social Learning Theory: attention, retention, motor reproduction, and motivation (Bandura, 1977). Attention was maximized by choosing an optimum length of time for this videotape. A time of between 20 and 25 minutes was chosen, which falls between the time 12 minutes used for Whalen's filmed intervention (1969) and the 50-minute videotape of Highlen and Voight (1978). This time period was thought to be more adequate than 12 minutes for allowing subjects enough time and examples to encode the material to be learned, and not fatigue them, thus losing their attention as a 50-minute videotape might do. The attention of subjects was also maintained in the Cognitive Modeling videotape by the use of careful word choice. For example, the model/narrator might invite subjects to "eavesdrop" on his or her thoughts rather than "observe" his or her thoughts, while the task is demonstrated.

Retention was maximized by reducing the 4th-Step Task to a simple, clear learning sequence to be taught to subjects (Harmon & Evans, 1984) and by using adequate cognitive rehearsal during the videotape (Highlen & Voight, 1978).

Cognitive rehearsal involves having the model/narrator instruct subjects to silently review the steps of the learning sequence until they are easily retained. Motor reproduction of doing the 4th-Step Task was emphasized to a small degree by briefly instructing subjects to visualize listing and describing 4th-Step Task items quickly and effortlessly. Motivation was cued by having the model/narrator in the videotape model positive self-talk by emitting statements such as, "Okay, I just got stuck. Now, what do I need to do to think of more items . . . ," or "I don't have to get this one perfect; I'll just move on to the next item," or "That's great; I'm doing fine."

To minimize extraneous stimuli (Myrick, 1969) and because the 4th-Step Task is a "solo" task, the model/narrator was the only person in the Cognitive Modeling videotape. Because significant effects for both same-sex and different-sex models were found in the literature (Harris & Evans, 1973; Highlen & Voight, 1978; Whalen, 1969), the best available model/narrator was chosen regardless of gender.

In keeping with Gist's (1989) findings, subjects were encouraged by the model/narrator to write down anything that came to mind, without worrying whether it is perfect or not. Also, the model/narrator avoided using direct, exhortative instructions of the type that may have caused ambiguity (Green & Marlatt, 1972; Marlatt, 1971; Whalen, 1969). For

example, direct instructions such as "be open," or "be honest," or "be fearless" were avoided because although these instructions may have been powerful, they may have given subjects no specific guidelines as to the appropriate responses, thus making the task ambiguous. In addition, in accordance with D'Zurilla's problem-solving model (1971), the model/narrator normalized the occurrence of personal problems in order to manipulate the "set" that subjects have toward listing their problems.

Independent Variables

This study examined three levels of a categorical independent variable, each operationalized as a different treatment condition. The first condition, referred to as the Control Condition, occurred in Group I, the Control Group. These subjects were asked to write a thought-provoking essay to deter focus on self and thus have no effect on the performance of the 4th-Step Task. The second condition, referred to as the AA Text/Self-essay Condition, occurred in Group II. These subjects in this group were asked to (a) read quotes from the AA text telling what the 4th Step is and how to do it (Alcoholics Anonymous, 1976) and (b) write a short essay about one's self. The third condition, referred to as the Videotape Condition, occurred in Group III. These subjects viewed a Cognitive Modeling videotape which told and showed how to do the 4th Step.

An additional independent variable in this study is Shame, operationalized as Shame Scores on the Internalized Shame Scale (Cook, 1991). Shame was not treated as a major independent variable in this study because to do so would have elevated it to a level of certainty that lacks justification in the empirical literature. Instead, Shame was included in the study to explore its association with the dependent measure in this study, aspects of performance of the 4th-Step Task.

Dependent Variables

There are three dependent variables in this study, each operationalized as raters' scores for each subject's performance of the 4th-Step Task. This performance was assessed from subjects' responses on the Personal Inventory Form (PIF), described in the Materials section. These three operationalized scores are (a) Number of Items Score (the number of items subjects generate on their PIFs), (b) Specificity of Examples Score (how specific the examples are that subjects give to illustrate items listed on their PIFs), and (c) Overall 4th Step Performance Score (the multiplicative product of #1 and #2).

Hypotheses and Research Questions

This study will test the following hypotheses:

1. The Number of Items Scores will be significantly different for all three groups and these scores

will take this form: Videotape Group > AA Text/Self-Essay Group > Control Group.

2. The Specificity of Examples Scores will be significantly different for all three groups and the scores will take this form: Videotape Group > AA Text/Self-Essay Group > Control Group.
3. The Overall 4th Step Performance Scores will be significantly different for all three groups and the scores will take this form: Videotape Group > AA Text/Self-Essay Group > Control Group.

This study will examine the following research questions:

1. Is Shame a mediating factor in the impact of either of the interventions (AA Text/Self-Essay or the Cognitive Modeling Videotape) on the 4th-Step performance variables in this study?
2. Are there any differences in 4th-Step Performance variables as a function of subjects' being high versus low in Shame?

CHAPTER III METHODS

This chapter contains a detailed description of this study's methodology used to test the hypotheses specified in Chapter II. It begins with descriptions, results, and implications of Pilot Test #1 and Pilot Test #2, conducted to help determine the most appropriate methodology for the main study.

One objective accomplished by the two pilot tests was the development of the Personal Inventory Form (Appendix E). Filling out the Personal Inventory Form (PIF), which asks subjects to list and describe their resentments, fears, and harmful acts done to others, is the actual 4th-Step task in the main study on which subjects' performances will be rated. The PIF consists of some brief directions followed by two blank columns. The left column is for listing problems and the right column is for giving examples of them.

The PIF #1, used in Pilot Test #1, is different from PIF #2, used both in Pilot Test #2 and ultimately in the main study. The PIF #1 contained three written models of specific problems (left column) and their examples (right

column). These three model problems and their accompanying examples were actually placed in their appropriate left and right columns on PIF #1 so as to provide a visual model of how to do the 4th-Step Task, essentially starting subjects' PIFs for them. By contrast, PIF #2 contained only one written model of a problem and an example of that problem. This single model was housed within the written instructions at the top of the PIF form rather than in the columns of the form itself. The rationale for changing PIF #1 into PIF #2 (its final form) is provided in the following summary of Pilot Test #1.

Summary of Pilot Test #1

Subjects for Pilot Test #1 were 24 volunteer Introductory Psychology students from the University of Florida's subject pool who received partial course credit for their participation in the study. The purposes of this pilot test were to (a) determine how long it takes subjects to complete the Personal Inventory Form (PIF #1); (b) determine whether the directions on PIF #1 were clear; (c) find an appropriate Control Condition to occupy subjects for a period of time equal to that required for the interventions in the other groups in the main study, but that does not affect the dependent variables (4th-Step Task performance); and (d) compare the effect of the AA text material to that of the control condition.

Subjects were randomly assigned to two groups and tested in two separate rooms under confidential conditions. The control group (Self-Essay) subjects ($n = 11$) entered the room, were asked to spend 20 minutes writing an essay about any aspect of themselves (it was not collected), and then were immediately asked to spend 20 minutes completing PIF #1. Subjects in the AA Text Group ($n = 13$) were asked to spend 20 minutes reading portions of the AA text describing how to do the 4th Step. Then they completed the PIF (20 minutes).

Subjects' PIF #1 responses were scored by the principal investigator who was blind to subjects' groups. The scoring criteria used are specified in the subsection of the Procedures section below entitled "Scoring Criteria for 4th Step Performance Variables from PIF Data." T-tests were performed on the data (see Table 1) and surprisingly, the control group (Self-Essay) outperformed the AA text group on Number of Items Scores ($p < .05$). This meant that control subjects had been able to think of more items for the left column of their PIFs than AA text subjects could. There was no significant difference between groups on Specificity of Examples Scores.

It was learned from Pilot Test #1 that the directions on PIF #1 are clear and that 20 minutes is adequate for doing the task. However, it was also learned that the self-essay seems to be a stronger stimulus than the AA text

Table 1

Summary of Pilot Test Data on Number of Items Scores and Specificity of Examples Scores

Pilot Test #1		
Dependent Variable	Self-Essay (n = 11)	AA Text (n = 13)
Number of Items	M = 15.2 (SD = 4.0)	M = 12.3 (SD = 2.9) *
Specificity	M = 4.2 (SD = .39)	M = 4.3 (SD = .30)
Pilot Test #2		
Dependent Variable	Essay (n = 10)	AA/Self-Essay (n = 10)
Number of Items	M = 11.7 (SD = 2.9)	M = 10.1 (SD = 4.0)
Specificity	M = 3.4 (SD = .42)	M = 3.9 (SD = .23) **
Note. * denotes $p < .05$ ** denotes $p < .005$		

material for helping subjects generate written items about their resentments, fears, and harmful acts in the left column of the PIF. Perhaps this is because writing the self-

essay is a less directed activity than reading the AA text, because it allows subjects to freely generate ideas, images, or memories. By contrast, the AA text material requires subjects to direct and confine their attention to reading and

processing the ideas in the text. It was concluded that because the self-essay may facilitate 4th-Step performance and because it happens that people in 12-Step programs often write their "life's story" (i.e., a self-essay) to help them do the 4th Step, a combined treatment package of AA text plus the self-essay should be tested because it more closely resembles the real-world conditions of 12-Step program members. The new name for this intervention is "AA Text/Self-Essay." Its effect was tested in Pilot Test #2.

Additionally, because it seemed plausible that the three written models provided for subjects on PIF #1 in Pilot Test #1 increased the Specificity Scores for both groups equally (and thus these examples may in fact be more appropriately used and more effective as part of the Cognitive Modeling videotape intervention), it was decided to refine PIF #1 (it would then be called PIF #2) so as to provide only the minimum directions and examples needed for subjects to understand the task. Indeed, because the PIF is an assessment instrument and not an intervention instrument, it should contain only enough material to explain to subjects what to do, not how to do it. The effects of the revised PIF #2, without the model statements in its columns, was tested in Pilot Test #2.

Summary of Pilot Test #2

Subjects for Pilot Test #2 ($n = 20$) were randomly assigned to two groups, as in Pilot #1. The purposes of

pilot test #2 were to (a) find a Control Condition (something to occupy control subjects so they would be in their experimental room for the same length of time as subjects in the other group were in their experimental room) that would not affect the dependent variables as the control condition in Pilot Test #1 had done; (b) ascertain that subjects could indeed understand what was required of them by PIF #2 (without the benefit of the specific examples used in PIF #1); (c) test the effect of the AA Text plus Self-essay intervention on subjects' 4th-Step performance; and (d) perform a power analysis in preparation for the main study.

Upon entering the experimental room, Control Group subjects ($n = 10$) were asked to write an essay for 20 minutes about the expression "Which came first, the chicken or the egg?" Following this exercise, subjects completed PIF #2 (20 minutes was allotted to do this). Subjects in the AA Text/Self-Essay Group ($n = 10$) were asked to read the AA text material for 10 minutes and then write an essay about themselves for 10 minutes (not collected). These subjects then completed PIF #2 (20 minutes was allotted). As in Pilot Test #1, subjects' responses to the PIF were scored for Number of Items and Specificity of Examples by the principal investigator.

As in Pilot test #1, t-tests were performed to compare groups in Pilot Test #2 on the two dependent measures,

Number of Items Score and Specificity of Examples Score (see Table 1). There was no significant difference between groups in Number of Items Scores; however, subjects in the AA Text/Self-Essay Group significantly outperformed subjects in the Control Group ($p < .005$) in Specificity.

From the results of Pilot Test #2 it appears that as a control condition, the "chicken-or-the-egg-essay" is indeed innocuous, as was intended. Therefore, this control condition will be used for the Control Group in the main study. Subjects in Pilot Test #2 were given a written question after completing PIF #2, that asked if they understood the directions on PIF #2; their responses indicated that the directions were clear. It was also learned from Pilot Test #2 that the AA Text/Self-Essay treatment helped subjects to improve Specificity of Examples Scores.

Because statistically significant effects were found for Specificity of Examples Scores in Pilot Test #2, the study was adequately powered to avoid a Type II error with 10 subjects per group. Anderson and Gilbert (1989) found significant effects on raters' scores of 4th-Step performance using 15 subjects per group. However, because the effect size for the Cognitive Modeling videotape was unknown, it was thought that more subjects may be needed to give the main study adequate power to detect a significant

effect. Therefore, a sample size of 25 subjects per group was considered adequate for the main study.

Subjects for the Main Study

Sixty volunteer subjects from the subject pool of Introductory Psychology students at the University of Florida received partial course credit for participating in this study. These subjects were randomly assigned to three groups ($n = 26$) using a stratified sampling procedure to ensure that groups were balanced on the demographic variables, race and gender. These groups included two experimental groups and a control group.

Materials for the Main Study

Instructions to Write the "Chicken or the Egg" Essay

Used only for the Control Group, this is a sheet of paper containing instructions and space for writing a short essay on the expression "Which came first, the chicken or the egg?" Subjects were instructed to interpret this saying by commenting on its relevance to politics, the environment, and college education (see Appendix D). All subjects in this group wrote their essays at the same time.

AA Text Material

This written material consists of two pages of direct quotes from AA's basic text entitled Alcoholics Anonymous (Alcoholics Anonymous, 1976). In sum, it tells subjects what the 4th Step is and how to do it. This material was

part of the treatment package given only to the AA Text/Self-essay Group. These subjects were told that they had 10 minutes to read it (see Appendix C). All subjects in this group read this material at the same time.

Instructions to Write a Personal Essay

These written instructions on a single sheet of paper asked subjects to write a short essay about themselves. The instructions informed subjects they had 10 minutes to write a brief synopsis of their lives and that they could focus on any aspect of their lives they wished (all subjects in this group wrote their personal essays at the same time). This essay was part of the AA Text/Self-Essay intervention given only to the AA Text/Self-essay Group (see Appendix B).

Cognitive Modeling Videotape to Facilitate 4th-Step Performance

This Cognitive Modeling videotape was approximately 20 minutes in length and was shown to all subjects in the Videotape Group at once. The videotape consisted of a narrator (principal investigator) using Cognitive Modeling techniques to help subjects better perform the 4th-Step Task which consisted of completing their PIFs. Following some introductory remarks explaining the value of taking a personal inventory and the purpose of the videotape, the narrator showed viewers a written model of part of his own PIF that had already been completed. This was done so

subjects would understand what they were going to be taught to do, using the Cognitive Modeling teaching method.

The Cognitive Modeling teaching method involved having the narrator describe the two-step sequence used to complete the PIF, demonstrate these steps while thinking his way through the task out loud, and then invite subjects to practice these techniques mentally, by way of review. The two steps in filling out PIF #2 consist of thinking of and listing one's fears, resentments, or harmful acts toward others in the left column and then writing specific examples of these items in the right column. This two-step process was modeled for fears, resentments, and for harmful acts so as to familiarize subjects with these three categories.

Throughout the videotape, procedures were illustrated using still video shots of PIFs that have numerous items in their columns and with over-the-shoulder shots of the narrator actually thinking his way through and then writing down more of his own PIF items. Some of the narrator's PIF items were taken from his own life in order to add authenticity to the videotape as well as to model frankness. Additional examples were chosen for use in the videotape because they were considered to be more relevant to college students' lives, thus enabling viewers to better identify with the content of the videotape.

The narrator emphasized that a good right column example is specific and concrete rather than vague or

general. The narrator's thoughts, spoken out loud, illustrated the contrast between vague versus specific right column examples, thereby modeling specificity. After the two-step process for completing PIF #2 was described and demonstrated, the narrator asked subjects to perform the task mentally, one step at a time. The script for the videotape is provided in the appendices (see Appendix J).

Personal Inventory Form (PIF)

This form (see Appendix E) had two blank columns and simple directions at the top. It was identical to PIF #2 (used in Pilot Test #2) and will hereafter be called, simply, the PIF. At the top of the PIF were directions about how to complete it, including one written example of a left column item and a corresponding example of a right column item. Extra paper was attached to it for use by subjects who needed more room in which to write. The PIF was completed by all subjects in all groups.

Data provided by the PIF was used to generate three scores (the dependent measures) obtained by trained raters: (a) Number of Items Score, (b) Specificity of Examples Score, and (c) Overall 4th-Step Performance Score. See the Procedures sections below for a description of how raters were trained and how scores were derived.

Instruments for the Main Study

Internalized Shame Scale

Levels of internalized shame were assessed with the Internalized Shame Scale (ISS) (Cook, 1991). This is a 30-item scale designed to measure the extent to which subjects have internalized painful levels of shame emotions (see Appendix G). The directions on the ISS tell respondents to circle the response to each item that describes how frequently they experience the emotion described by each item. Each item is scored by the respondent on a 5-point, Likert-type scale from "never" to "almost always." Only 24 of the items are used for scoring shame, and they are all negatively worded. Embedded within the 30 total items are 6 positively worded self-esteem items, adapted from the Rosenberg Self-Esteem Scale; however, in the context of the ISS, these six items only correlate .57 with the ten-item Rosenberg scale. The purpose of these items is to correct for the response set that can occur when all items are worded in the same direction, not to measure self-esteem. The 24-item shame score is the only score that is recommended for research and clinical use (Cook, 1991).

To establish the alpha reliability of the ISS, it was administered to a nonclinical college student sample of 645 subjects. The alpha reliability coefficient for Shame Scores was .95. A combined clinical sample of 370 subjects

including subjects under treatment for alcoholism, depression, eating disorders, and other psychiatric disorders, produced an alpha of .96 for the ISS. The author claims these reliabilities have been consistently reproduced with smaller samples, both clinical and nonclinical (Cook, 1991). The test-retest reliability coefficient over a 9-week period with 44 graduate students was .84.

Because shame is part of the domain of the self, there is necessarily some overlap with scales that measure aspects of the self-concept or self-esteem. The ISS has been checked in different studies for correlations with several different measures of self-esteem. The ISS was found to correlate with the Tennessee Self-Concept Scale ($-.66$), the Coopersmith ($-.52$), the Janis-Field ($-.77$), and the Rosenberg ($-.74$). All correlations were significant at $p < .001$ (Cook, 1991), providing support for the convergent validity with self-esteem. This still leaves considerable variance unaccounted for. Cook (1991) suggests what is being measured by global self-esteem scales may be internalized shame. In a sample of 96 college students, the ISS correlated $-.16$ with the Marlowe-Crowne Social Desirability Scale, suggesting that among this population social desirability does not significantly influence the ISS.

Cook (1991) recommends using the following guidelines for judging the level of one's shame, based upon ISS scores.

Moderately high scores on the ISS are between 50 and 60, high scores are between 61-72, and scores 73 and over are considered very high. Most clinical samples have means of 50 or above.

Demographic Questionnaire

A short demographic questionnaire was completed by subjects in this study, obtaining information about each subject's race, age, and gender (see Appendix H).

Procedure for the Main Study

Subject Recruitment

When signing up for the study, subjects were told that they would be asked to confidentially write a series of personal statements about themselves (PIF) and then fill out two questionnaires (Internalized Shame Scale and Demographics Questionnaire). Because it was desirable for subjects to be motivated to do the 4th-Step task (just as 12-Step program members are motivated to do so in order to recover), they were told their responses might help them to understand themselves better. These conditions approximated as closely as possible the real-world conditions under which recovering alcoholics (a) know in advance that they will be doing a 4th Step, (b) are motivated to do it, and (c) have time to process this information in advance.

Procedure for Stratified Random Assignment of Subjects

All subjects in all three groups (two experimental groups and a control group) reported to a check-in desk in

the Psychology Building at the University of Florida at the times they had volunteered to sign up for the experiment. At this desk, subjects were assigned to one of three experimental rooms (each one having one of the three experimental conditions) by using a stratified random assignment procedure as follows.

A table of random numbers was used to generate four separate lists of assignment numbers, each assignment number corresponding to one of three experimental room numbers. Four separate lists of room assignment numbers were needed to stratify for the four possible combinations of race and gender (e.g., one list for black females, one list for black males, one for white females, and one for white males). As each subject approached the check-in desk, the experimenter found that subject's experimental room number on the appropriate list and he/she was sent directly to that room for participation in the experiment. As each random number from a given list was used to assign a subject to a room, it was crossed off the list, and the next time that list was used, the next random number on that list was used to make that assignment, and so on. In this way, equal proportions of subjects with a given race and gender were assigned to each of the three experimental conditions.

Training the Monitor to Implement the Interventions

Each experimental group was run by one of three trained monitors. These monitors were undergraduate researchers

(male or female) who were trained by the principal investigator. Training consisted of the monitors' studying a checklist of things to say to subjects during the experimental sessions. The purpose of the checklist was to ensure what monitors say to subjects would be the same across all experimental sessions. Additionally, the monitors were coached to exhibit appropriate behavior during the experimental sessions. For example, the monitors were instructed how to answer anticipated questions from subjects and where to sit during the sessions.

Implementing the Interventions

Because each group consisted of approximately 26 subjects and because of space limitations, three separate experimental sessions (one for each of three groups) with approximately nine subjects in each session were run simultaneously in three separate experimental rooms. In order to run the entire sample of 77 subjects, it was necessary to do this three times on successive days, with the same three experimental rooms being reserved for the experiment. The experimental conditions assigned to these three rooms were different on each of these 3 days. Similarly, the monitors assigned to each of the three conditions were different on each of the 3 experimental days. Such a rotation system controlled for room differences such as lighting, temperature, or comfort, as well as monitor differences such as appearance or

personality. In summary, the three groups had proportionately equal exposure to three experimental rooms and monitors.

As subjects entered the experimental room, the monitors, blind to the study's hypotheses, greeted them and gave them an Informed Consent Form to read and sign (see Appendix A). The Consent Form told subjects they would be completing several confidential questionnaires about themselves and how long this would take, and that a number code and anonymous drop box would be used to ensure their anonymity. Each subject was given an anonymous number code that they will wrote on each piece of paper that they completed during the experiment. They were told the purpose of this coding system was to allow the primary investigator to match data to subjects after the data had been dropped in the box. Subjects were then exposed to their respective treatment conditions described below, based on predetermined stratified random sampling:

Control Group: Subjects were told that they would be spending 20 minutes writing an essay about the saying "Which came first, the chicken or the egg?", and then filling out a confidential form asking them to list and describe their personal problems. They were also told this essay was not to be collected. After subjects had written this essay (timed by the monitor), subjects were asked to put away all other materials and to complete their PIFs, all at the same time. This took an additional 20 minutes.

AA Text/Self-Essay Group: Subjects viewed a videotape of a commentator presenting the AA text material (5 minutes), read the same AA text material on their own for 5 minutes, and then wrote the self-essay, an essay

about any aspect of themselves they wished (10 minutes). They were first told that viewing the videotape and reading the AA text material would help them to subsequently complete a form (PIF) asking them to list and describe their personal problems. After completing their essays, subjects put away all other materials (they were allowed to keep their essays) and were given 20 additional minutes to complete their PIFs.

Videotape Group: Subjects were told that they would be watching a videotape that might make it easier for them to fill out a confidential form asking them to list and describe their personal problems, which they would be doing after they watched the videotape. After they watched the videotape, subjects completed their PIFs, all at the same time. This took an additional 20 minutes.

After completing their PIFs, subjects in all three groups completed the Internalized Shame Scale (Appendix G) and a Demographic Form (Appendix G), which took about 15 minutes. These forms were placed in the drop box, along with the PIFs. After completing these questionnaires and placing them in the drop box to ensure confidentiality, all subjects were given a written Debriefing Form (Appendix F) to read and allowed to leave.

Training of Raters to Score PIFs

Two undergraduate students, one male and one female, were trained by the principal investigator to score the PIF data using the criteria specified below. This training used Cognitive Modeling techniques and involved the raters' studying the specificity criteria (listed below) and then discussing these criteria, thereby elaborating on them. During this training, the principal investigator modeled his

thought processes while performing the scoring procedure, then supervised the raters as they practiced the scoring procedure, using some of the Pilot Test PIF responses for practice. Training sessions continued until raters achieved a Spearman Brown coefficient of .90, using scored Pilot Test PIF data to calculate this reliability. The principal investigator was the third rater and his practice scoring results were included in calculating reliability results for the rater training.

All three raters were blind to experimental group while scoring the data from the main study, because the raw data had been shuffled prior to scoring. All three raters scored all PIFs by deriving the Number of Items Scores, the Specificity of Examples Scores, and the Overall 4th Step Performance Scores for each PIF (scoring procedures are described in the next section). Once all PIFs had been scored, Spearman coefficients were again calculated and found to be .94.

Scoring of the 4th-Step Performance Variables from PIF Data

The scoring system for deriving the Number of Items Scores and the Specificity of Examples Scores was developed by the primary investigator. The original structure of the specificity criteria was intended to address the wording of the 5th Step as it appears in the 12 Steps: "Admitted to God, to ourselves, and to another human being the exact nature of our wrongs" (Alcoholics Anonymous, 1976, p. 59).

Specificity was defined as, "free from ambiguity, restricted by nature to a particular individual, situation, relation, or effect" (Woolf, 1973). The specificity criteria were elaborated upon and refined during the rater training process, until it was determined that all PIF sentences could be reliably categorized in terms of the degree to which they met the above definition.

Deriving the Specificity of Examples Scores was done by examining the examples given in the Right Column of the PIF. First, each example was assigned its own individual specificity score (from 1 to 5), according to the specificity criteria that will be explained shortly. Then, all of these individual specificity scores were averaged, yielding the Specificity of Examples Score.

The scoring criteria for deriving the Specificity of Examples Scores for the main study were similar to, although more refined, than those used to score the PIFs in the two pilot studies. To make the description of these scoring criteria clear for the reader, several examples of PIF items are used here to illustrate them. Although specificity scoring pertained only to the items in the right column (where subjects were asked to give a specific example of the left column item), the corresponding left column items are included here so the right column items will make sense to the reader. To avoid confusion about the left column versus the right column items below, left column items will be

placed (in parentheses) and right column items will be placed "in quotes". The scoring criteria for Specificity of Examples Scores (ranging from one to five) are as follows:

- 5 - High Specificity: A reference to a particular behavioral event by self or others that includes enough specific information that this behavioral event can be distinguished as separate from other events. Also, for any Right Column item to be given a score of 5, the subject must attempt to assign the element of time to that item (e.g., "... when we were kids" or "... yesterday"). For example, (I hurt my younger brother). . . . "I ignored him while he told me about his football game at dinner last night" would be scored as a 5.
- 4 - (a) clearly falls into neither category 5 nor category 3 or (b) is good enough to be a 5 except it makes no attempt at specifying the time the event occurred.
- 3 - Medium Specificity: A reference to a general behavioral pattern performed by self or others that does not concretely specify any particular events, for example, (I hurt my younger brother). . . . "I was mean to him", would be scored as a 3.
- 2 - provides only a label of a person place or thing such that the rater can only detect a positive or negative valence and no other information is given, for example, (I hurt my younger brother). . . . "I was bad".
- 1 - Low Specificity: (a) restates a given left column item without adding any new information, for example, (I hurt my younger brother) "I just did", or (b) subject gave up, for example, "I don't know why".

Deriving a subject's Number of Items Scores from his or her PIF was simply a matter of counting the items in the left column where that subject listed his or her fears, resentments, or harmful acts done to others. For example, if a given PIF had 17 items written in its left column, the

Number of Items Score for that PIF would be 17, provided each left column item was accompanied by no more and no less than one right column item. Any left column item that was not accompanied by any right column item at all was given a count of zero. If on the other hand, a given left column item was accompanied by, say, five different examples in the right column, then that left column item was given a count of five. Thus, the Number of Items Score was simply the sum of all the left column counts.

CHAPTER IV RESULTS

Preliminary Analyses

Table 2 presents the sample's descriptive statistics, by group. To ensure that the stratified random assignment procedure resulted in equal distributions across groups on the demographic variables race and gender, Chi-Square analyses were performed. Results indicated that there were no significant differences in the relative percentages of either nonwhites versus whites nor females versus males, as a function of group. Thus random assignment was considered successful.

Although results regarding the variable Shame will be discussed later, it is considered to be a trait that might affect subjects' performance on the dependent measures. Therefore, an ANOVA was performed to ensure that the assignment of subjects to groups had not resulted in differences between groups on this variable. Subjects' group was entered as the independent variable and subject's Shame Scores was the dependent variable. Results indicated that subject's Shame Scores did not differ significantly as a

function of their group. Therefore randomization succeeded here as well.

Table 2

Descriptive Statistics for Race, Gender, Age, and Shame by Group

Variable	Control	AA Text	Video	Sample
N	26	27	24	77
Race				
% White	88	78	79	82
% Nonwhite	12	22	21	18
Gender				
% Male	15	19	17	16
% Female	85	81	83	84
Mean age	17.9	18.4	18.2	18.2
Shame Scores				
Min.	10	4	4	4
Max.	59	73	51	73
Mean	31.6	37.9	32.2	34.3
S.D.	10.7	18.7	11.4	14.4

Before the study's main analyses could proceed, it was necessary to ensure adequate reliability of the three raters who scored the PIF data to derive the Number of Items Scores and the Specificity of Examples Scores. Assuming the reliability of individual judges is similar, the

Spearman-Brown formula can be used to estimate the effective reliability, or "aggregate" reliability of all three judges (Rosenthal, 1990, p. 51.). This was done as follows.

Each rater scored all of the 1,555 items included on all subjects' PIFs. Pearson Correlations were computed for the three possible intercorrelations between raters, with the results being .90, .78, and .82. These Pearson correlations were transformed to standardized correlations using an r to z table, then averaged. This mean standardized correlation was then transformed back to r , thereby obtaining the average reliability to be used in the Spearman Brown Formula for computing the effective reliability of all three raters. The resulting Spearman Brown Coefficient for the effective reliability of the three raters was .94, which Rosenthal (1990) considers adequate.

To determine the appropriateness of creating the composite dependent variable, Overall 4th Step Performance, from the multiplicative product of the two dependent variables, Number of Items Score and Specificity of Examples Score, one final preliminary analysis was needed to determine the nature of the correlation (if any) between the two dependent variables. To do this, Pearson correlation analyses were performed. The correlation between these two variables (see Table 3) was nonsignificant ($r = -.08$, $p < .51$). Because no significantly negative correlation between these two variables was found, it was inappropriate to create

Table 3

Pearson Correlation Matrix

	NIS	Specificity	Shame
NIS	-	-.08	.13
Specificity	-	-	.03
Shame	-	-	-

Note. NIS denotes Number of Items Score

No correlations were significant at the $p < .05$ level.

from their multiplicative product the third dependent variable (mentioned in Hypothesis Three), Overall 4th Step Performance Score. Indeed, to create such a variable from the product of two variables that share no variance would add no new information to the experimental results. This third variable was thus excluded from further analysis, rendering Hypothesis Three untestable.

Primary Analyses to Test Each Hypothesis

Hypothesis One stated that the Number of Items Scores would be significantly different for all three groups and these scores would take this form: Videotape Group > AA Text/Self-Essay Group > Control Group. This hypothesis was tested using an Analysis of Variance (ANOVA), with subjects' group as the independent variable and the Number of Items Scores as the dependent variable. Sample and group means for

Number of Items Scores can be seen in Table 4. As seen in Table 5 which depicts the ANOVA results, there were no significant differences in Number of Items Scores as a function of group. Because of these null results, no post-hoc comparisons of means were performed. Hypothesis One was thus considered to be unsupported by this study's data.

Table 4

Means, Ranges, and Standard Deviations for Number of Items Scores and Specificity of Examples Scores as a Function of Group and For the Total Sample

	Control	AA Text	Video	Sample
N	26	27	24	77
Number of Items				
Min.	10	10	11	10
Max.	28	30	31	31
Mean	19.5	20.8	20.5	20.2
S.D.	4.9	5.9	6.4	5.7
Specificity Scores				
Min.	2.9	2.7	3.8	2.7
Max.	4.1	4.4	4.9	4.9
Mean	3.5	3.5	4.4	3.8
S.D.	.39	.41	.35	.38

Note. The possible range for Specificity of Examples scores is from 1 (least specific) to 5 (most specific).

Although no predictions were made regarding the effects of gender or gender x group on the Number of Items Scores, these results are reported in Table 5. While there was no significant effect of gender or of gender x group on the Number of Items Scores, the effect of gender on Number of Items Scores approached significance, $F(5,71) = 3.67$, $p < .0593$. Females generated slightly more ($M = 20.8$) items on their PIFs than did males ($M = 17.6$).

Table 5

Analyses of Variance to Assess Differences in Number of Items Scores and Specificity of Examples Scores as a Function of Group, Gender, and Gender X Group

Dependent Variable			
Number of Items			
Source	DF	F-value	p-value
Group	2,76	0.39	.6776
Gender	1,76	3.67	.0593
Gender x Group	2,76	0.55	.5796
Specificity of Examples			
Source	DF	F-value	p-value
Group	2,76	21.79	.0001
Gender	1,76	0.46	.4990
Gender x Group	2,76	0.57	.5705

Hypothesis Two stated that the Specificity of Examples Scores would be significantly different for all three groups and these scores would take this form: Videotape Group > AA Text/Self-Essay Group > Control Group. This hypothesis was tested using an Analysis of Variance (ANOVA), with subjects' group as the independent variable and the Specificity of Examples Score as the dependent variable. Sample and group means for Specificity are reported in Table 4. As predicted, there was a significant difference in these scores as a function of group ($F(5,71) = 42.84, p < .0001$). Table 5 presents these ANOVA results. Follow-up Tukey's comparison's of group means indicated the Videotape Group had significantly higher ($p < .05$) Specificity Scores than both the AA Text/Self-Essay Group and the Control Group. However, the prediction that the AA Text/Self-Essay Group would have higher Specificity Scores than the Control Group was not supported; there was no significant difference between the scores of these two groups.

As an additional point of interest related to Hypothesis Two (see Table 5), neither gender nor gender x group approached significance in their effects on Specificity of Examples Scores. Whereas females generated slightly more items than males, there was not a similar gender differences trend in specificity.

Ancillary Analyses to Examine the Research Questions

Research Question One asked whether Shame was a mediator of the impact of either of the interventions (AA Text/Self-Essay) on the 4th-Step Performance variables, Number of Items Scores and Specificity of Examples Scores. Two separate analyses of Covariance (ANCOVAS) were performed to test this hypothesis, with Group entered as the independent variable, Shame as the covariate, and Number of Items Scores and Specificity of Examples Scores as the dependent variables, respectively. The results of both ANCOVAS were nonsignificant (see Table 6), indicating that Shame is not a mediator of the relationship between group and the dependent variables. As reported in Table 3, Shame was neither significantly correlated with Number of Items Scores ($r = .13$) nor Specificity of Examples Scores ($r = .03$). Finally, neither Gender nor Gender \times Group had significant effects of Number of Items Scores or Specificity of Examples Scores.

Research Question Two asked whether there were any differences in the 4th-Step Performance variables, Number of Items Scores and Specificity of Examples Scores, as a function of subjects' being high versus low in Shame. This hypothesis was tested using two separate ANOVAs. One ANOVA used Shame Scores as the independent variable and the Number of Items Score as the dependent variable. The other ANOVA used Shame as the independent variable and Specificity of Examples Score as the dependent variable.

Table 6

Analyses of Covariance to Assess Differences in Number of Items Scores and Specificity of Examples Scores as a Function of Group, Gender, and Gender by Group, with Shame as a Covariate

Dependent Variable			
Number of Items			
Source	DF	F-value	p-value
Group	2, 76	0.32	0.727
Gender	1, 76	2.67	0.101
Gender x Group	2, 76	0.58	0.564
Specificity of Examples			
Source	DF	F-value	p-value
Group	2, 76	43.31	0.0001
Gender	1, 76	0.43	0.512
Gender x Group	2, 76	0.51	0.600

For the purposes of these analyses, sample Shame Scores were dichotomized into high and low, using a score of 50 as the cutoff. This cutoff point was chosen because scores above 50 are considered clinically significant (Cook, 1987). Results of the two ANOVAs indicated there were no significant differences in either Number of Items Scores or Specificity of Examples Scores as a function of Shame Scores. An additional ANOVA was performed, comparing the sample's upper

and lower quartiles in Shame Scores, again with no significant results. These findings suggest that 4th-Step Performance variables did not significantly differ as a function of Shame scores.

CHAPTER V DISCUSSION

Implications of the Study

The first dependent variable examined in the analyses of this study was the Number of Items Scores, a count of the number of items subjects generated on their Personal Inventory Forms (PIFs) in the allotted 20 minutes. This variable was of interest because it was considered to be a measure of the ease with which subjects could generate thoughts about their resentments, fears, and harmful acts. The reasoning was that the more data points (specific resentments, fears, or harmful acts) one can generate to describe one's behavior, the better one can then identify problem patterns in these data points, thus the more benefit one can derive from working the 4th Step.

Null Findings for Number of Items Scores

Hypothesis One predicted subjects in the Videotape Group would produce more PIF items than subjects in the AA Text/Self-Essay Group, who in turn would generate more items than the Control Group subjects. Results indicated there were no differences between any of the three groups' means in their Number of Items Scores; thus, Hypothesis One was not

supported. Whether any of the treatments were superior for stimulating subjects' self-thoughts is uncertain, given the time-limited nature of the task (20 minutes). Because experimental session monitors reported that many subjects were still writing at the end of the 20-minute time periods, a ceiling effect on the measurements of Number of Items may have been in force. Therefore, the null finding for group differences in Number of Items Scores could be interpreted as no group differences in speed of writing. However, this is uncertain, because group differences in the number of subjects still writing at the end of the 20-minute time period were not examined. A more conclusive test for group differences in Number of Items Scores would have been to provide sufficient time for all subjects to record all the self-thoughts they could think of, thus controlling for writing speed. Such a time period would have exceeded the number of subject-hours allocated for this study. In fact, a real 4th Step is done in this fashion and can often take many hours to complete.

The relative importance of the Number of Items Score variable compared to the Specificity of Examples Score variable is a question of quantity versus quality. Quantity is important for doing the first part of the 4th Step (listing and describing one's resentments, fears, and harmful acts) because numerous data points are needed to generate patterns in one's behavior. It is these patterns that are

identified in the rest of the 4th Step. In effect, the larger the sample of data points, the more reliably one can discern a given pattern in those points. Unfortunately, the effect of the Cognitive Modeling videotape and of the AA Text/Self-Essay on subjects' ability to generate enough items to allow for a meaningful 4th-Step experience is unknown due to the possible ceiling effect caused by these time limitations.

The major finding of this experiment came from testing Hypothesis Two for group differences in Specificity of Examples Scores. This hypothesis predicted the Videotape Group subjects would outperform the AA Text/Self-Essay Group subjects in Specificity, who would in turn outperform the Control Group subjects. In fact, the Videotape Group subjects did outperform the other two groups, as predicted. However, contrary to the prediction, the AA Text/Self-Essay Group did not outperform the Control Group in Specificity; there were no differences between these groups on this variable.

Before discussing the effect of the Cognitive Modeling Videotape on Specificity, the null finding just mentioned for Specificity between the AA Text/Self-Essay Group and the Control Group will be addressed, particularly since it apparently fails to replicate results of Pilot Study #2. This pilot study found that the AA Text/Self-Essay Group

subjects were significantly more Specific on their PIFs than the Control Group subjects.

These apparently discrepant findings may be attributed to the fact that the Specificity scoring criteria used in the main study did not exactly replicate those used in the Pilot Study. The scoring criteria used in the pilot study were substantially refined during the raters' training process for the main study. Unlike in the main study, in the pilot study the primary investigator alone scored the data, using less well-articulated Specificity criteria. It is possible that if all three raters who scored the main study data were to rescore the pilot data, no difference between the two groups would be found. Random and/or systematic error in the less precise pilot measurements may have generated a spurious difference between groups in Pilot Test #2.

The most plausible explanation for the null differences in Specificity between the AA Text/Self-Essay and Control Groups is that the AA text did not provide subjects with enough behavioral cues to enable them to be more specific on their PIFs than Control subjects. This reasoning is consistent with previous findings that procedural instructions given by a model/narrator that are direct or exhortative but nonspecific (as parts of the AA text are) can create ambiguity for subjects (Green & Marlatt, 1972; Marlatt, 1971; Whalen, 1969). Even if exhortations in the AA

text material had motivated subjects to try harder, they may not have known how to do so, procedurally.

A possible but less likely explanation for these null findings is that subjects in the AA Text/Self-Essay Group were overstimulated by the combination of three different activities (watching a videotape, reading written material, and writing a personal essay), a combination which provided them with more information than they could process. This seems unlikely, given the relatively few procedural instructions provided by the AA text material. Furthermore, the redundancy of the videotape script and the AA text material--they were the same exact words--seems more likely to have increased subjects' understanding than to have confused them. If the AA Text/Self-Essay subjects were indeed overstimulated or confused, such an effect would weaken the main finding of this study--that the Cognitive Modeling Videotape significantly improved subjects' Specificity. It would weaken this finding because some of the difference in specificity found between the Videotape Group and the AA Text/Self-Essay Group might then be attributed to the detrimental effect of confusion rather than the enhancing effect of the videotape.

Group Differences in Specificity

The central finding of this study is that the Cognitive Modeling Videotape Group significantly outperformed both the AA Text/Self-Essay and Control Groups in Specificity of

Examples Scores. At issue had been the question of whether people, when anonymously listing and giving specific examples of their personal problems, would be maximally specific on their own, or whether they could be influenced to be more specific through a training videotape. Also at issue was the question of whether Specificity is trainable. The results of this study indicate that a 20-minute Cognitive Modeling instructional videotape can indeed be effective for training people to improve their performance in the 4th-Step skill of writing more specifically about their resentments, fears, and harmful acts. Furthermore, this training effect can be achieved without the relatively expensive and time-consuming live instruction, performance feedback, or role-play exercises used in Anderson and Gilbert's (1989) intervention.

It is believed the causal component of the Cognitive Modeling Videotape treatment was instructional/procedural in nature, rather than motivational in nature. This is because the main focus of the videotape was to show and tell subjects how to list and describe their problems, not why they should do so. However, the videotape script did contain brief opening remarks about how taking a personal inventory can be valuable. Without using process checks on subjects' motivation levels across groups, this question is unanswerable via this study. Such a process check could have been done by asking subjects before and after their treatments how strongly they wanted to complete their PIFs.

The focus of the Cognitive Modeling Videotape was not to motivate subjects to do the 4th Step. It was assumed that because working any of the 12 Steps is voluntary, 12-Step members working the 4th Step are already adequately motivated.

This study's results suggest that if one knows nothing about the 12 Steps, the basic AA text does not help one do the 4th Step very specifically. It does not suggest that the basic AA text is of little use for real 12-Step program members who have other sources of information and support for doing the 4th Step, such as numerous other members' sharing how they work the steps.

The question is whether the Cognitive Modeling Videotape would help real 12-Step members to benefit more from doing a real 4th Step. This study does not answer this question definitively, nor does it hold up the Cognitive Modeling Videotape as a replacement for any parts of the basic AA text. Rather, it suggests that perhaps because of its strong effect on Specificity in this controlled setting, this videotape or one like it may be beneficial to 12-Step members as a supplement to all the other help on the 4th Step they are already getting.

A final point regarding the main result of this study concerns the issue of whether the effect on Specificity was due to the medium (videotape) or the message in the videotape's content. Given the current emphasis on video

learning in young people and because of the relatively young age of the sample in this study, one might suspect that the Cognitive Modeling videotape was more effective merely because it used the video medium. However, to control for medium, the AA text material was presented to the AA Text/Self-Essay Group in video as well as in written form. Both videotapes (Cognitive Modeling and AA text) were produced in the same studio by the same technician using the same commentator, background, dress, and amount of eye contact. Therefore, it is believed the message content of the videotape rather than the medium of the videotape caused the significant effect on Specificity.

Null Findings for Shame

The null results for Research Questions One and Two, regarding Shame, will now be discussed. Shame was of interest in this study because many alcoholics in treatment have clinically significant Shame scores (Cook, 1987). It was suspected that some of the defenses commonly mounted against Shame (e.g., rage, grandiosity, denial) might make the 4th Step particularly difficult or even harmful for highly shamed people to do. Had this been found to be the case, it would have carried implications for the proper timing for doing the 4th Step during one's recovery. For example, some authors question the wisdom of doing the 4th and 5th Steps early in sobriety, such as during a 28-day

treatment program, when needed defenses may be disrupted (Potter-Efron, 1989).

In exploring Research Question One, asking if Shame was a significant mediator of the effect of treatment on the dependent measures, no significant results were found. Additionally, Shame was neither correlated with the Number of Items subjects could generate about their resentments, fears, or harmful acts, nor with the Specificity with which they could describe these problems.

In exploring Research Question Two, no differences on either of the dependent measures were found as a function of subjects' Shame scores being above or below 50 or as a function of subjects' Shame scores being in the upper versus lower quartiles. Very few ($n = 11$) subjects in this study scored above 50 on The Internalized Shame Scale, rendering the statistical power for testing Hypothesis Four in doubt; yet, a more powerful analysis would probably not find an effect for Shame, given its nonsignificant correlation with either of the investigated dependent measures.

These null results for Shame are inconclusive as to whether Shame mediates 4th-Step performance among 12-Step program members who are working the 12 Steps. This is because it is unknown how many, if any, of the subjects in this study who were clinically elevated in Shame ($n = 11$) were also 12-Step program members. Rather than assume, based on clinical observations or case studies, that Shame mediates

4th Step performance, more empirical research is needed to investigate this issue.

Possible Uses for the Cognitive Modeling Videotape

The results of this study suggest that a modified version of the Cognitive Modeling Videotape might be useful in inpatient or outpatient drug and alcohol treatment settings that incorporate the 12-Steps in their treatment package. Many alcohol and drug abuse treatment models, such as the Minnesota Model, emphasize the 12 Steps as a central component of recovery from addiction. Such treatment models offer 12-Step discussion groups as a standard treatment component. Often, such discussion groups are led by staff members who are not 12-Step program members and thus are not working the 12 Steps, by staff who are 12-Step program members but are not professionally trained in mental health, or by both. Anderson and Gilbert's (1989) study suggested that such discussion groups are relatively ineffective at increasing 4th and 5th Step performance. It is possible that the Cognitive Modeling Videotape used in the current study would be a cost-effective intervention for this purpose.

Another potential application for this intervention videotape would be for use by 12-Step program members. A low-cost version of the videotape could be made available through a mail-order service, such as the Hazelden Foundation, which makes multi-media recovery materials available to 12-Step program members. Twelve-Step program members could use the

videotape in conjunction with help from their sponsors and the basic AA text or the basic texts for their particular 12-Step programs. Whether there is a felt need among 12-Step fellowships for such a service is uncertain. There exists among some 12-Step members a sentiment against outside interventions which might change the tools of recovery. This is evidenced by the AA saying, "If it works, don't fix it."

A final possibility for using the Cognitive Modeling Videotape might be in mental health counseling, particularly within Cognitive Behavioral, problem-solving orientations. This videotape might be used as an assessment device for gathering information about a client's problems, much as the genogram is used in family therapy. The videotape might prove useful in individual or group contexts for helping clients to articulate their problems, thus providing a focus for problem-solving psychotherapy.

The Results Viewed in Relation to Other Empirical Work on the 4th Step

This study is the second one to test an intervention for improving performance on the 4th Step of the 12 Steps of Alcoholics Anonymous. The first study was by Anderson and Gilbert (1989). These authors tested the effects of communication skills training on performance of both the 4th Step (listing and describing one's character defects) and 5th Step (sharing their 4th Step with their sponsor) for hospitalized male alcoholics. This intervention involved 8

hours of live instruction and role-plays using computer monitors for performance feedback devices. Pre- and posttreatment assessments were made of subjects' 4th- and 5th-Step performance, using videotaped role-plays during which subjects pretended they were sharing 3 months in the future their 4th-Step inventories with their sponsors.

Performances were judged on five dimensions: (a) self-disclosiveness, (b) topic focus (self versus other), (c) personal responsibility taking, (d) topic-congruent affect, and (e) linking one's drinking behavior to one's character. The communication skills group outperformed a comparison group (who received focused group discussions on the 4th and 5th Steps but no behavioral training) on all measures but self-disclosiveness, for which there were no differences. The authors concluded that certain communication skills are necessary for performing the 4th and 5th Steps, and these skills are trainable by teaching specific communication behaviors. Although the authors stressed specificity during the communication training, this variable was not rated as a dependent measure. Furthermore, the 4th and 5th Steps were combined into one activity, whereas in 12-Step programs, they are performed as two separate activities.

The current experiment differed from Anderson and Gilbert's study in three ways: (a) it sought to have more experimental control by using a laboratory setting, (b) it tested the effects of a less time-consuming (20 minutes

versus 8 hours), more cost-effective (videotape versus communication training by a skilled trainer) treatment, and (c) it focused on only two particular skills thought to be essential to performing the core of the 4th Step: listing and describing one's character defects with high specificity.

This study targeted the first two parts of the 4th Step: listing and describing one's resentments, fears, and harmful acts. The rest of the 4th Step involves adopting an attitude of acceptance and forgiveness toward others who may have done harm to the person doing the 4th Step. Finally, as part of the 4th Step, one discerns problem patterns in one's life, and examines what alternative, more adaptive behaviors might be. Without specifically listing and describing those aspects of the self one wants to change in the first parts of the 4th Step, the rest of the 4th Step cannot be performed adequately. Indeed, the rest of the 12 Steps which address the removal of those character defects identified in the 4th Step would then be meaningless.

The Importance of Specificity

Except by chance, one cannot consciously solve a problem without first describing it. Einstein stated that it is more important to be able to adequately describe a problem than it is to solve it, because the solution to a well-described problem is often self-evident (Einstein & Infeld, 1938). Mahoney argued that the clear and specific description of a

problem is a "critical prerequisite to problem analysis" (Mahoney & Kenigsberg, 1980, p. 334).

The second stage of D'Zurilla and Goldfried's (1971) problem-solving model is problem definition and formulation. These authors stated, "The need for specificity and comprehensiveness in describing the details of the problem cannot be overstated" (D'Zurilla & Goldfried, 1971, p. 113). The problem solver must avoid vague terms to ensure the effectiveness of subsequent problem-solving stages, which include formulating and choosing the solution, implementing the solution, and evaluating its results. Stating the problem specifically and concretely forces the individual to identify information that is relevant to solving the problem (D'Zurilla & Goldfried, 1971). Specificity is just as essential to the 4th Step as it is to the problem-solving model.

The purpose of the 4th Step is for one to identify things about oneself that he or she wants to change, character defects that cause unhappiness and may prevent one from staying sober. As such, the 4th Step is a problem identification and problem description task. Listing and describing one's personal inventory items specifically delineates one's problems by giving exact, relevant information in one's 4th Step. This argument will now be illustrated for the 4th Step categories of resentments,

fears, and harmful acts, using scored items from the Personal Inventory Forms of subjects in this study.

In the case of resentments, specificity enables the writer (the person doing the 4th Step) and the sponsor (the person with whom the writer is sharing his/her 4th Step) to gauge the extent of harm done to the writer by others. If information is specific, it provides a clear picture of the degree to which external events (of whatever magnitude) cause the writer to become angry. This enables the writer to discover to what degree the environment (people, places, and situations) control him or her. For example, "I'm mad at Tammy: She didn't call last night like she said she would" (scored as 5) provides exact information about the extent to which Tammy harmed the writer. If the writer had said instead, "I'm mad at Tammy: She's mean to me" (scored as 3), it would be unclear whether Tammy had, say, stolen from, physically harmed, or merely ignored the writer. In this case, the items scored as 5 gives the writer and the writer's sponsor exact information about the extent to which the writer has allowed Tammy to control him or her by making him or her angry.

In the case of fears, specificity serves a similar purpose: It allows the writer and sponsor to discover the nature of the writer's fears and to gauge without distortion the severity of the threats associated with these fears. For example, "I'm afraid of having sex: I have never had sex and

I'm afraid my girlfriend, who has, will expect me to be good at it" (scored as 5) conveys more information than "I'm afraid of having sex: It's just risky" (scored as 3). In the latter, less specific example, numerous interpretations of "risky" are possible, such as risking injuring one's pride or self-esteem or risking disease. This vagueness prevents the writer and the writer's sponsor from identifying the real nature of this fear.

An advantage of specificity in the case of harmful acts is it provides a reality check against exaggerating or minimizing one's harm to others, thereby reducing one's tendency to be overly self-critical or to deny one's problems. For example, "I hurt my younger sister: She looks up to me, and yesterday on the phone, I told her she was too fat," provides specific information about the extent of this harmful act (this item was scored as a 5 in the study). If this subject had written instead, "I hurt my younger sister: I was mean to her" (scored a 3), it would be difficult for the writer or sponsor to judge the extent of this harm. For example, did she sexually abuse her little sister or merely criticize her on the phone?

If someone who tends to be overly self-critical writes a vague personal inventory, the therapeutic opportunity to disconfirm this destructive bias, either through the writer's own observations during the 4th Step or through the sponsor's observations during the 5th Step, is lost. Similarly, if a

writer's tendency is to minimize his or her harmful acts through denial, and s/he writes a vague inventory, that writer loses the therapeutic opportunity to confront his/her own denial and thus improve one's self-esteem (Muhleman, 1987).

In addition to providing reality checks regarding one's resentments, fears, and harmful acts, specificity facilitates the development of the unique and confidential relationship that two 12-Step members enjoy with each other. This "sponsor-sponsee" relationship is seen by some to be the heart of the 12-Step recovery process (Muhleman, 1987). For many recovering alcoholics, this relationship marks the first time one honestly describes oneself to another person. The act of completely revealing one's secrets to a sponsor who offers complete forgiveness and acceptance is fundamental to the recovery process (Muhleman, 1987). One cannot totally reveal oneself to another person without providing specific information to that person. This is reflected in the wording of the 5th Step, "Admitted to God, to ourselves, and to another human being the exact nature of our wrongs" (Alcoholics Anonymous, 1976, p. 59).

Limitations of the Study

Although the laboratory setting used in this study afforded strong internal validity, it necessarily sacrificed a certain amount of external validity. It is very likely that the only treatment difference between groups in this

study which could have caused the differences found in Specificity was the Cognitive Modeling Videotape. However, given the setting, sample, and simulated nature of the 4th Step task in this study, the generalizeability of the findings of this study must be interpreted with caution.

Due to the laboratory setting, this study was unable to directly test the effects of the Cognitive Modeling Videotape on 4th Step performance, using real 12-Step program members and real 4th Steps. A more naturalistic setting would obviously be within the context of 12-step programs or addiction treatment programs that teach the 12 Steps as part of their treatment packages. In such a context, people doing the 4th Step might have various levels of resistance to being in a 12-Step program, various levels of collaboration with their sponsors (if they even have a sponsor), and various levels of talent among those sponsors. Such subjects would work for various amounts of time on their 4th Steps. Some 12-Step program members complete their first 4th Step within months of starting the program; some members take years to work their 4th Step, or even begin it. It would be extremely challenging, given the relative inaccessibility to the anonymous memberships of 12-Step programs, to control for this enormous variance in subjects in a naturalistic setting (Bebbington, 1976).

Typically, a 12-Step member writes his or her 4th Step with intermittent help from at least one other member, most

often one's sponsor. Not all 12-Step members have sponsors or use sponsors for their 5th Step. Some members use a person from their church, another trusted friend, or a mental health professional for their 5th Step. In any case, 12-Step members get from other members information, advice, and social support while working the 12 Steps. The comparison group used in this study (AA Text/Self-Essay) provided subjects with none of these resources, except the basic AA text material (Alcoholics Anonymous, 1976).

The limited generalizability of this study's sample arises from the fact that the sample consisted completely of college students who were typically not in 12-Step programs. It is possible that because they have relatively high intelligence, are constantly in a learning environment, and may be more eager to learn, these subjects may have responded better to the Cognitive Modeling Videotape than would a sample of 12-Step program members or patients in treatment.

The characteristic of this study's sample presenting the greatest threat to external validity is that because subjects' membership in 12-Step programs was not assessed, it is uncertain whether many of them were 12-Step program members. If they were not in 12-Step programs, they would not have worked the first three Steps which involve admitting powerlessness, coming to believe in a higher power, and surrendering to that power. This preparation may make people more willing, more hopeful, and less afraid to write their

4th Step inventories, a condition that does not apply to the subjects in this study. Additionally, people in 12-Step programs may be motivated to do the 4th Step because they hear other members reporting positive results from doing so. Such motivational effects might enhance 4th-Step performance among real 12-Step members, an advantage this study's subjects did not have.

On the other hand, subjects in this study were aware before completing their PIFs that no one who knew them would read them, because they were placed anonymously in a drop box. In real 4th-Step programs, the members know in advance that they will share the contents of their 4th Step with someone else during their 5th Step. This knowledge may inhibit specificity or disclosiveness in describing one's resentments, fears, and harmful acts during the execution of real 4th Steps. Subjects in this study had no such obstacles to being specific or disclosive on their PIFs. In summary, the variables of setting, sample, and motivational conditions surrounding the 4th Step task in this study are quite different from those same variables in real 12-Step programs.

A final limitation of this study concerns its relatively narrow focus on the dependent measure, Specificity. Although results suggest the Cognitive Modeling Videotape significantly influenced subject's Specificity, it is unknown if it would have positive training effects on other 4th-Step

skills such as disclosiveness or honesty. Indeed, it is unknown if subjects who viewed the videotape wrote specifically about important personal issues as opposed to unimportant ones, or if they even wrote information about themselves that was accurate.

Suggested Future Research

It would be useful to test the effects of the Cognitive Modeling Videotape on other relevant 4th-Step variables such as disclosiveness or accuracy of information. To control for the many nuisance variables encountered in the naturalistic setting of a 12-Step program, a laboratory setting similar to the one used for this study is needed. Such a setting would incur the same threats to generalizeability as this study did, but it would provide a fuller picture of the impact of the Cognitive Modeling Videotape.

To address the shortcomings in external validity in this study, a test of an intervention videotape with real 12-Step members would be necessary. Several naturalistic settings are conceivable, each with its unique challenges to experimental control. One purpose of developing the Cognitive Modeling Videotape was to help 12-Step members who are already practicing the 12 Steps to work the 4th Step. For this reason it would be ideal to test such a videotape using members of an AA or other 12-Step fellowship. Alternatively, a similar study might be run using patients in a drug or alcohol treatment program, as was done by Anderson

and Gilbert (1989). It would be valuable to determine if the relatively cost-effective and time-saving videotape could produce in a clinical setting the same successful results that Anderson's communication training program produced. If so, the videotape might prove useful as a training device for inpatient and outpatient substance abuse programs. The disadvantage of sampling from a treatment population is that people in treatment are often not voluntarily working the 12 Steps, if at all. Attending AA or other 12-Step meetings in a treatment center is a different activity from working the 12 Steps themselves.

A setting that compromises between the laboratory and a treatment program might be an aftercare context. People who have gone through an inpatient or outpatient treatment program for substance abuse, who actively attend aftercare support groups, and who are active 12-Step members might be willing to try the Cognitive Modeling Videotape when they work on their 4th Step. A group viewing format might be most effective, so individuals without VCRs or the money to buy the videotape could participate in the study. Such an aftercare setting would provide the advantage of using subjects who have had adequate time to work the first three steps in preparation for the 4th Step. This would be better than using subjects in treatment, who must move through these steps quickly (and maybe inadequately) to complete them within the span of time allotted for their treatment.

Summary

The 4th Step is pivotal to the 12-Step person-changing process because it helps people identify problems in their lives that need to be solved in order for them to live happier lives. The results of this study suggest that the Cognitive Modeling Videotape to teach the 4th Step in 12-Step recovery programs may be a valuable supplement to the many forms of support traditionally received in these programs. This study does not prove conclusively that this intervention to teach the 4th Step would be valuable for 12-Step members to use, but it does suggest that perhaps psychology can lend support to the vast network of 12-Step recovery programs.

APPENDIX A
INFORMED CONSENT FORM

You are being asked to volunteer as a participant in a research study. This form is designed to inform you about the study and to answer any questions you may have. The purpose of this study is to help psychologists learn more about doing psychotherapy.

Participants in this study will be asked to complete a questionnaire soliciting information about how people see themselves. Participants will be asked not to put their names or barcodes on these completed questionnaires, to insure their anonymity. Participants will be asked to view a short videotape, read some written instructions, and/or write a short essay. They will then be asked to confidentially write personal statements about themselves. Both the questionnaires and personal written material will be dropped at random into a large covered box. These questionnaires will later be read in complete confidentiality by the primary investigator and two anonymous raters who will not know who has completed them. It will take about one hour to participate in this study.

You will be awarded 3 course credits for participating. Immediately following the experiment, participants will have a chance to learn more about the nature of the study. Any questions or concerns that participants may have as a result of participating in this study will be addressed.

There are no risks or discomforts anticipated for participants in this study. The questionnaires are challenging for most people to complete, but you may benefit by gaining increased awareness about yourself. If you wish to discuss any discomforts you may experience, you may call Mr. Chris Dunn, Principal Investigator, at 392-9436. Please read the statement below and sign the form.

I have been fully informed of the procedure for the above-described study and understand its possible benefits and risks. I also understand that I will receive no compensation other than course credit for participation in this study. I understand that I am free to discontinue my participation in this study at any time. I agree to participate in the procedure and have received a copy of this description.

Signature of Participant

Date

Signature of Principal Investigator

Date

Christopher W. Dunn, M.S.
Graduate Student, Psychology
392-9436, Box 19 Psychology

APPENDIX B
PERSONAL ESSAY

Please write an essay about yourself. There are no particular guidelines with regard to the content of your essay. If you would like additional sheets of paper, please request them from the Principal Investigator. You have 10 minutes for writing your essay. What you write will not be shared with anyone; please take your essay with you at the end of the study.

APPENDIX C

TAKING A PERSONAL INVENTORY

None of us is free from flaws or the problems in our lives which are caused by these flaws. Many of us forget this when looking at our shortcomings, and we think that our flaws are more numerous than those of others. This just is not the case. We would not be human if we did not have shortcomings.

How Flaws Cause Our Problems

Sometimes, what we think are the problems in our lives are really just symptoms; the real problems are our character flaws. We all have emotional problems, and many of these problems can be seen as the result of our personal shortcomings. Every time we impose our instincts unreasonably upon others, unhappiness results. For example, suppose our instinct for status and prestige becomes blown out of proportion and we step on the toes of others who then revolt and hurt us back. We might see this conflict as the problem, but the real problem is our character flaw which led us to step on people's toes to begin with. Another example might be that if we demand too much attention, protection, or love from other people we invite domination or revulsion from them. If we harbor grudges or plan to get revenge for such defeats, we are beating ourselves with the club of anger we had intended for others. We need to learn when we are upset with another person, for whatever reason, and we need to find out our part in that conflict and face up to it.

What a Personal Inventory Is

A personal inventory is a vigorous effort to identify what our personal character flaws are. We want to find out exactly how, when, and where our natural instincts have warped us. We wish to look squarely at the unhappiness this process has caused others and ourselves. Because human beings are never alike, each of us will need to determine what their individual character defects are. We all look at this challenge from different personal backgrounds. Those of us with religious training would see the inventory as a list of violations of moral principles. Others will think of this

list as defects of character, and still others will call it an index of maladjustments. Some will become annoyed if we talk about immorality or sin. But all who are in the least reasonable will agree upon one point: we all have plenty that is wrong with us, and if we expect to become happier people, we will have to identify things about ourselves which we want to change.

How to Do a Personal Inventory

"Resentments" can be a number one offender. In dealing with resentments, we set them on paper, listing people, institutions or principles with whom we were angry. We asked ourselves why we were angry. On our grudge list we set opposite each name our injuries. We were usually as definite as this example:

I'm resentful at:

The Cause:

Mr. Brown

His attention to my wife. May get my job at the office

My employer

He's unreasonable-unjust-overbearing. Threatens to fire me for drinking and padding my expense account.

My girlfriend(boyfriend)

Misunderstands and nags me. May want to date other people.

We went back through our lives. Nothing counted but thoroughness and honesty. Many of us had fears to put on the list. We put them on paper, even though we had no resentment connected to them. We reviewed our own conduct over the past years. Where had we been selfish, dishonest, or inconsiderate? Whom had we hurt? Did we unjustifiably arouse jealousy, suspicion, or bitterness? Where were we at fault, what should we have done instead? We got this all down on paper and looked at it.

APPENDIX D
ESSAY

Please write your answers to the questions below. If you would like additional sheets of paper, please request them from the Principal Investigator. You have 20 minutes to write your essay. What you write will not be shared with anyone; please take your essay with you at the end of the study..

1. What do you think is the meaning of the expression,
"Which came first, the chicken or the egg"?
2. How does this expression apply to:
 - a. Politics?
 - b. The environment?
 - c. College education?
3. Do you think this expression is useful for discussing each of the three topics listed above? Why or why not?

APPENDIX E
PERSONAL INVENTORY FORM

This is a private inventory of your resentments, your fears, and the harm you have done to others. You may write as many items or as few items from each category as you wish, whatever comes easiest to you.

In the Left Column you will just list each particular resentment, fear, or harmful act that you did to another person. As an example of a resentment in the Left Column you might write, "I'm mad at Susan". (The Left Column might also contain some or all of your fears and the harm you may have done to others).

In the Right Column you will briefly describe each item that appeared in the Left Column by listing specific examples of the items in the Left Column. Be brief and specific. For the example of a resentment just given, in the Right Column you might write, "because she left her clothes all over my side of the room this morning". For any given Left Column item, you may provide as many specific examples in the Right Column as you wish.

For every Left Column item you list, please make sure you provide at least one Right Column item--as briefly and as specifically as you can. You may provide as many examples (Right Column items) of a given Left Column item as you wish. Do not leave the Right Column blank for any Left Column item. Please write as many items as you can in the allotted time (approximately 30 minutes). Your goal is to be as brief and specific as possible. Your answers are completely confidential; no one will know who wrote your answers.

Please turn the page and begin.

Left ColumnRight Column

1.1.

2.2.

3.3.

4.4.

5.5.

6.6.

7.7.

8.8.

9.9.

10.10.

Left Column	Right Column
11.	11.
12.	12.
13.	13.
14.	14.
15.	15.
16.	16.
17.	17.
18.	18.
19.	19.
20.	20.

(Use Back of Page if needed)

APPENDIX F
DEBRIEFING FORM

Thank you for participating in this study. Your Personal Inventory Forms will be kept completely confidential through the use of your secret number code. They will be locked in a file drawer to which only the Principal Investigator and two research assistants have access.

The purpose of this study was to compare the effects of two different ways of giving instructions to do the personal inventory task. In one of three groups you were in, an instructional videotape was shown to subjects before they completed the Personal Inventory Form. In the second of three groups, subjects were given written instructions to do the task, and a third control group received no instructions before attempting the task.

This personal inventory task is similar to one which members of 12-Step programs, such as Alcoholics Anonymous or Alanon, perform as part of their 12-Step recovery programs. It is difficult for people to write about what they would like to change about themselves. In this study, we hopefully identified ways to help people such as clients with addiction problems perform this task better.

Thank you again for your participation in this project. If you have any questions at all about this study, please feel free to contact the Principal Investigator, Chris Dunn, at 392-9436.

APPENDIX G
THE INTERNALIZED SHAME SCALE

DIRECTIONS: Below is a list of statements describing feelings or experiences that you may have from time to time or that are familiar to you because you have had these feelings and experiences for a long time. These are all statements of feelings and experiences that are generally painful or negative in some way. Some people will seldom or never have had many of these feelings and experiences. Everyone has had some of these feelings at some time, but if you find that these statements describe the way you feel a good deal of the time, it can be painful just reading them. Try to be as honest as you can in responding.

Read each statement carefully and mark the number in the space to the left of the item that indicates the frequency with which you find yourself feeling or experiencing what is described in the statement. Use the scale below. DO NOT OMIT ANY ITEM.

SCALE

1-NEVER 2-SELDOM 3-SOMETIMES 4-FREQUENTLY 5-ALMOST ALWAYS

- ___1. I feel like I am never quite good enough.
- ___2. I feel somehow left out.
- ___3. I think that people look down on me.
- ___4. All in all, I am inclined to feel that I am a success.
- ___5. I scold myself and put myself down.
- ___6. I feel insecure about others' opinions of me.
- ___7. Compared to other people I feel like I somehow never measure up.
- ___8. I see myself as being very small and insignificant.
- ___9. I feel I have much to be proud of.
- ___10. I feel intensely inadequate and full of self doubt.

SCALE

1-NEVER 2-SELDOM 3-SOMETIMES 4-FREQUENTLY 5-ALMOST ALWAYS

- ___11. I feel as if I am somehow defective as a person, like there is something basically wrong with me.
- ___12. When I compare myself to others I am just not as important.
- ___13. I have an overpowering fear that my faults will be revealed in front of others.
- ___14. I feel I have a number of good qualities.
- ___15. I see myself striving for perfection only to continually fall short.
- ___16. I think others are able to see my defects.
- ___17. I could beat myself over the head with a club when I make a mistake.
- ___18. On the whole, I am satisfied with myself.
- ___19. I would like to shrink away when I make a mistake.
- ___20. I replay painful events over and over in my mind until I feel overwhelmed.
- ___21. I feel that I am a person of worth at least on an equal plane with others.
- ___22. At times I feel like I will break into a thousand pieces.
- ___23. I feel as if I have lost control over my body functions and my feelings.
- ___24. Sometimes I feel no bigger than a pea.
- ___25. At times I feel so exposed that I wish the earth would open up and swallow me up.
- ___26. I have this painful gap within me that I have not been able to fill.

SCALE

1-NEVER 2-SELDOM 3-SOMETIMES 4-FREQUENTLY 5-ALMOST ALWAYS

- ____27. I feel empty and unfulfilled.
- ____28. I take a positive attitude toward myself.
- ____29. My loneliness is more like emptiness.
- ____30. I always feel like there is something missing.

APPENDIX H
DEMOGRAPHICS FORM

1. Age at last birthday _____
2. Sex (circle one) Male Female
3. Primary ethnic or racial identification (check one):
 - _____ Black/African-American
 - _____ Native American
 - _____ Hispanic
 - _____ Oriental
 - _____ White/Caucasian
 - _____ Other

APPENDIX I
PIF SCORING FORM

Subject number _____

Rater's name _____

Subject's age _____

Subject's sex _____

Subject's ethnic background _____

PIF Item number	Specificity score	PIF Item number	Specificity score
1.	_____	16.	_____
2.	_____	17.	_____
3.	_____	18.	_____
4.	_____	19.	_____
5.	_____	20.	_____
6.	_____	21.	_____
7.	_____	22.	_____
8.	_____	23.	_____
9.	_____	24.	_____
10.	_____	25.	_____
11.	_____	26.	_____
12.	_____	27.	_____
13.	_____	28.	_____
14.	_____	29.	_____
15.	_____	30.	_____

Sum of all Specificity scores = Specificity of = _____
 Total Number of PIF Items Examples Score

_____ X _____ = _____

Number of Specificity of Overall 4th Step
 Items Score Examples Score Performance Score

APPENDIX J
COGNITIVE MODELING VIDEOTAPE SCRIPT

(Face shot): All of us have fear and resentments to some degree. And all of us have done harmful actions to other people at some time or other. These are some of the things that make us human. Even though our fears and our resentments and our harmful actions can be hard to deal with or hard to face up to, it is valuable for us to get clear on these issues because it can help us identify patterns in ourselves that we might want to change someday. One way to get clear on these issues is to get them down on paper by making a written inventory of all of them. This can be done by simply filling out what's called a personal inventory form, which is what you'll be doing after you watch this video. I myself have done this several times in my life and it has helped me a great deal to get to know myself better and to understand what's going on with me. The purpose of this video is to make it easier for you to fill out your own personal inventory form. The idea is to write down as many concrete examples of our fears, resentments, and harmful actions as we can think of. Okay. Let's take a look at a personal inventory form of mine that I've been working on that shows some of my fears, resentments, and harmful actions (cut).

(Graphics shot): My personal list is in reality much longer than this, but you can still see from looking at this part of it that it is nothing more than two columns, a Left one and a Right one. In the Left Column I have listed my issues-- either a fear, I'm afraid of blank, I'm afraid of blank, etc.; a resentment, I'm mad at blank, I'm mad at blank, etc.; or a harmful act, I hurt blank, I hurt blank, etc. The Right Column is for giving specific examples of each one of the items in the Left Column, that's all. Notice that for each item in the Left Column, I filled in as many examples as I could think of. In some cases I could only think of one example, but in other cases I had a whole bunch of examples to write down. But I always wrote down at least one specific, concrete example. These examples can be in the past or present, it doesn't matter. They may be embarrassing, they may be justified, they may be silly; it doesn't matter, as long as they are true for me and as long as they're specific enough to give a total stranger an exact

picture of what you're talking about, they belong on this inventory. What I was trying to do is take a snapshot of myself, which means that I had to write down anything that came to mind, without censoring it. Notice that I happened to give lots of petty reasons why I'm mad at my girlfriend. Even though I know that some of them are ridiculous, I wrote them down because they are in my head (Cut).

(Face shot): Okay. Now that you have the picture in your heads of what a personal inventory form is supposed to look like when it's been filled out, I'd like to invite you to eavesdrop on my private thoughts while I write down some more inventory items so you can see how I think my way through the process. It's a lot easier than most people make it, once you learn how to think your way through it (Cut).

(Over-the-shoulder-shot): All right. I think I'll take these categories one at a time--resentments, fears, and harmful acts. I guess I'll do resentments first. What about my school life? my family life? my love life? my work life? I ought to be able to come up with something from those areas. Okay, resentments first. In school...I'm mad at the University of Florida (narrator writes this down). Now how about the Right Column? ...because I started my assistantship in July but won't get paid till September (narrator writes this down). That's a good, concrete reason that refers to a single, specific event in time, because it tells who, what, when, and where. Good. How about my family life? Okay, I guess I'm mad at my parents. Now, I just have to give a good, specific example of this anger. Two winters ago instead of visiting me in Gainesville they took a trip to Spain (narrator writes this down). Okay, good, that's a specific event, and it tells who, what, when, and where. Any other examples I can think of? They only sent me enough money to buy half of a plane ticket home for Xmas this year, instead of the whole ticket (narrator writes this down). But that's being greedy, I'm too old to be hitting them up for money every Christmas. Never mind, it doesn't matter whether it's wrong or right, I'll just get it down on paper and worry about it later. What about at work? I'm mad at a psychiatrist. Last week he insulted me, saying a computer could do my job better than I (narrator writes this down). Okay. If this were the real thing like you'll be doing in a few minutes, I would keep going with resentments until I ran out of ideas. Then, I'd switch. I never let myself sit idle because ideas just don't come that way. So let me move on to another category--fears. Again, let me think of school, family, love, and work, that ought to do it. At school. Hmmm... (writes) I'm afraid of not getting my degree (narrator writes this). Okay, let me think of a specific, concrete example that would let a stranger know exactly what I'm talking about. How about this. Because I used to be a carpenter and nobody on the faculty thinks a carpenter should

become a psychologist (narrator writes this). Wait a minute, that's just being paranoid. Doesn't matter, it's what I thought of first, so I'll just get it down on paper and move ahead. Maybe before I move on I can think of another example of fearing not getting my degree. Yesterday I was obsessing about my dissertation and almost ran a red light on 13th St (narrator writes this). That's a good example of my fears, I guess. And how about I had a fantasy this morning that I was going to have to pay back 30,000 dollars in school loans on a carpenter's wages (narrator writes this). Good. If I could think of any more examples of this one fear, I'd write them all down, as many as would come to me. To do this, I just tell myself to forget about why, or because, and just think to myself, "for example". I try to paint the picture, just try to illustrate the items in the Left Column by giving examples. Never mind about reasons, I'll deal with all that stuff at a later date. All I'm doing now is splashing a bunch of stuff about myself down on paper so maybe some patterns will emerge, that's all. (Cut).

(Face shot) Okay, now let's say I've run out of ideas for fears, and I want to move on, because I don't want to let my pencil stop moving. I'll consider my harmful acts. Now, this topic doesn't make me feel great about myself and besides, I'm not a vicious person. How about when I was a kid? Did I harm anybody. I harmed Mr. Tingy. Me and my friends used to shoot golf balls at his garage. I harmed Allison. In 1980 when I broke up with her I told her it was because she didn't turn me on. I didn't show up for a date once in 1981 and didn't bother to call her to tell her. To try to get rid of her, I told her I had a crush on somebody else, when in fact I didn't. I could go on and on about poor Allison, and would do so if I had more time, but I think you get the picture. I just keep listing stuff in the Right Column till I run out of ideas and then move on to the next item. (Cut).

(Face shot): Okay. I think you get the idea. Now, before I close, let's do a quick mental session in which I will time you for a few seconds while you rehearse what we've covered so far. When I say begin, I want you to take 30 seconds to think of your favorite resentment and make up as many examples to illustrate it as you can. Then think to yourself "for example, da, da, da" and ask yourself "who? what? when? and where?". Remember, these examples should tell a total stranger who, what, when, or where. (Cut). Begin. (Graphics for 30 seconds): (Cut). (Face shot): Stop. Good. Now, please take 30 seconds to pick your favorite fear and think of as many examples of that fear as you can. What is it that shows just how scared you really are? (Cut). Begin. (Graphics for 30 seconds): (Cut). (Face Shot): Stop. Good. Maybe you could only think of one or two examples, and that's fine, as long as they are specific and not vague. Finally, please

take 30 seconds to think of acts of harm you have done to others. Begin. (Cut). (Graphics for 30 seconds): (Cut). (Face Shot): Stop. Okay. In closing, let me remind you that the key to filling out a personal inventory form is to move fast, and not allow yourself to get stuck on anything. Just keep moving around to new categories and writing down whatever comes into your head. If you think of a satellite going to the moon to explore, just as you will be exploring what's in your own head, just remember that the camera on the satellite takes photos of everything in sight, without censoring anything. It just keeps clicking away--pictures of craters, dust, the earth, sunsets, etc. It doesn't worry about whether the photos are any good or not. Then, it takes all the pictures back to the earth for them to be analyzed. It doesn't analyze first and take pictures later. It just starts shooting shots. That's what you'll be doing when you fill out your own inventory forms. Just take snapshots of what's in your head, write it down, and worry about it later. Okay. And one final point is in order: You'll only have 30 minutes to do this in, and you obviously won't be able to make a complete inventory of yourself in such a short time, probably nobody could do that. But try to not get bogged down. Anytime you get stuck, just go on to another category--fears, resentments, and harm. If you get stuck, think of school, work, family, or your love life. I hope that this video has given you some ideas about how to do your own inventories, and I hope that doing so benefits you.

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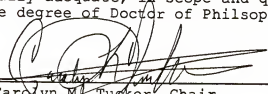
BIOGRAPHICAL SKETCH

Christopher Williams Dunn was born in Boston, Massachusetts, in 1951. His father taught business administration at the University of Delaware, and his mother taught French, privately. Chris graduated from public high school in Newark, Delaware, in 1969.

In 1973 Chris received his Bachelor of Science degree in philosophy and religion from Colgate University. While at Colgate, he competed internationally in track and field, participating in the high jump in the 1972 Olympics in Munich, Germany. From 1973 to 1988 he worked as a self-employed carpenter and woodworker, designing and building custom wood furniture.


Chris entered the counseling psychology program at the University of Florida in 1988, receiving his Master of Science degree in 1990. In August, 1993, he will complete his clinical internship at the Seattle Veterans Affairs Medical Center.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



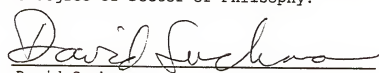
Carolyn M. Tucker, Chair
Professor of Psychology

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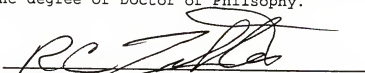
Martin Heesacker
Associate Professor of Psychology

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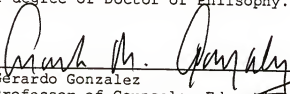
David Suchman
Professor of Psychology

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Robert Ziller
Professor of Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Gerardo Gonzalez
Professor of Counselor Education

This dissertation was submitted to the Graduate Faculty of the Department of Psychology in the College of Liberal Arts and Sciences and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

August, 1993



Dean, Graduate School